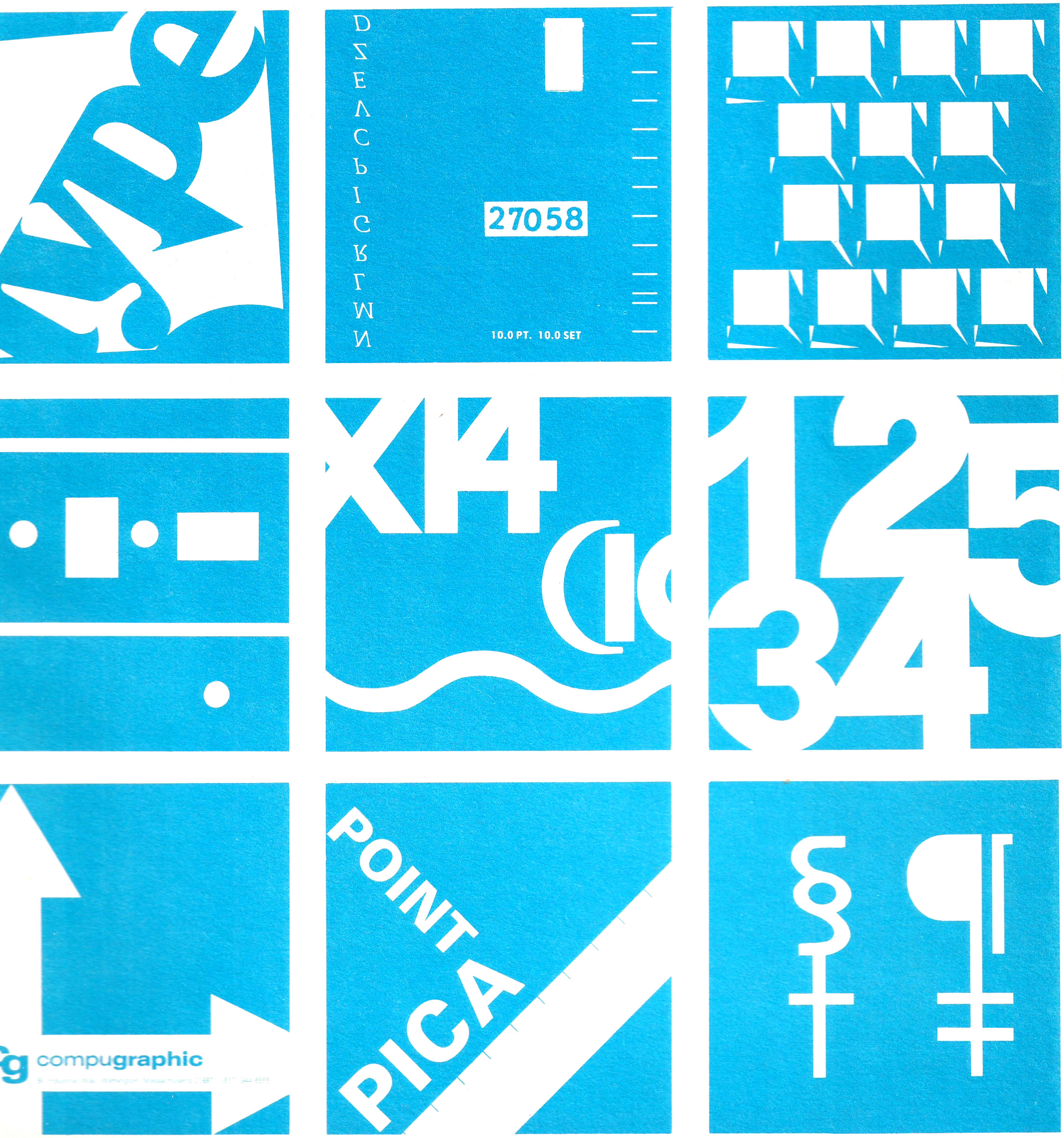
ExecuWriter
Applications Manual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compugraphic
Industrial Way, Wilmington, Massachusetts 01887 (617) 944-6555

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POWER
OVERSET
DISPLAY
LINE LENGTH
1 4 5 C

FOREWORD

To fully understand the operation of the **Compugraphic ExecuWriter** system, it is recommended that each section of the applications manual be reviewed. Typesetting exercises should be practiced until completely understood.

A complimentary film strip in a Compugraphic style accompanies the system. Although some of the exercises call for different styles, all exercises shown in the manual can be set with the complimentary film strip. If designated styles are not available, simply set the practice exercise using the complimentary type style.

INTRODUCTION

The Compugraphic ExecuWriter photocomposer provides quality typeset manuscript copy by employing simple typewriter-like procedures.

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the ExecuWriter is generally known as photocomposition.

The secretary-shift typewriter keyboard provides complete operator control. Simply by striking a key, manuscript copy is automatically set to full measures or positioned on the left and/or right margins. A 32-image character display shows all characters and functions as they are typed from the photocomposer keyboard.

The photocomposer, working like a camera, consists of a light projection system, a negative film strip containing the alphabet, numeric and miscellaneous characters, a holder for photographic material and a lens. The characters are photographed with an instantaneous flash of light, passing through the lens and exposed on the photographic material.

As characters are typed, they are retained line by line. Activation of the typewriter Return key causes the character images to be flashed and photographed onto the material. As each line is ended, the material is automatically advanced in preparation for the next line.

After completion of the typesetting operation, the exposed photographic material is processed. This process is similar to the development of film from an ordinary camera. The finished print is then pasted onto a form from which the final steps are taken for printing.

WHAT HAPPENS TO YOUR TYPE?

MANUSCRIPT & MARKUP

⑩ACADEMIC AFFAIRS /24

(1) Field of Study /12

X16

In addition to the major field of /12 study listed below, undergraduate subjects are also offered in four fields of which only advanced degrees are given: linguistics, /24 nuclear engineering, and cooperation /12 of a number of departments, include biomedical engineering, environmental studies, health sciences and technology. /24

School of Architecture /12 X33 7%

Architecture
Urban Studies and Planning
Visual Design /24
History, Theory, and Criticism of Visual Arts

School of Engineering 39%

Aeronautics and Astronautics
Chemical Engineering
Mechanical Engineering
Metallurgy and Material Science

School of Management 6%

Behavior Science in Management
General Management
Management Science
Special Program in Management

Major fields of study leading to the S.B. degree with the percentage of upperclass students in each School: /24

X16

The Office of Supportive Instructional /12 Services offers students academic counseling, tutoring, and skill screening. Consultation with the faculty and the coordination of academic programs is a major responsibility of the office. The Office of Supportive Instructional Services is open from 8:30 a.m. to 4:30 p.m., Monday through Friday. There is no fee for its services. /16

Hellen B. Moore, Director /12
Room 055
738-2137

X16

The Office of Continuing Education provides assistance to students who are returning to college on a part-time basis, and helps them make the transition to being a student again through orientation and study skills workshops. The Director acts as academic adviser to all CE students until they declare a concentration and offers individual counseling on both personal and academic matters.

Carol Pooler, Director
Room 156
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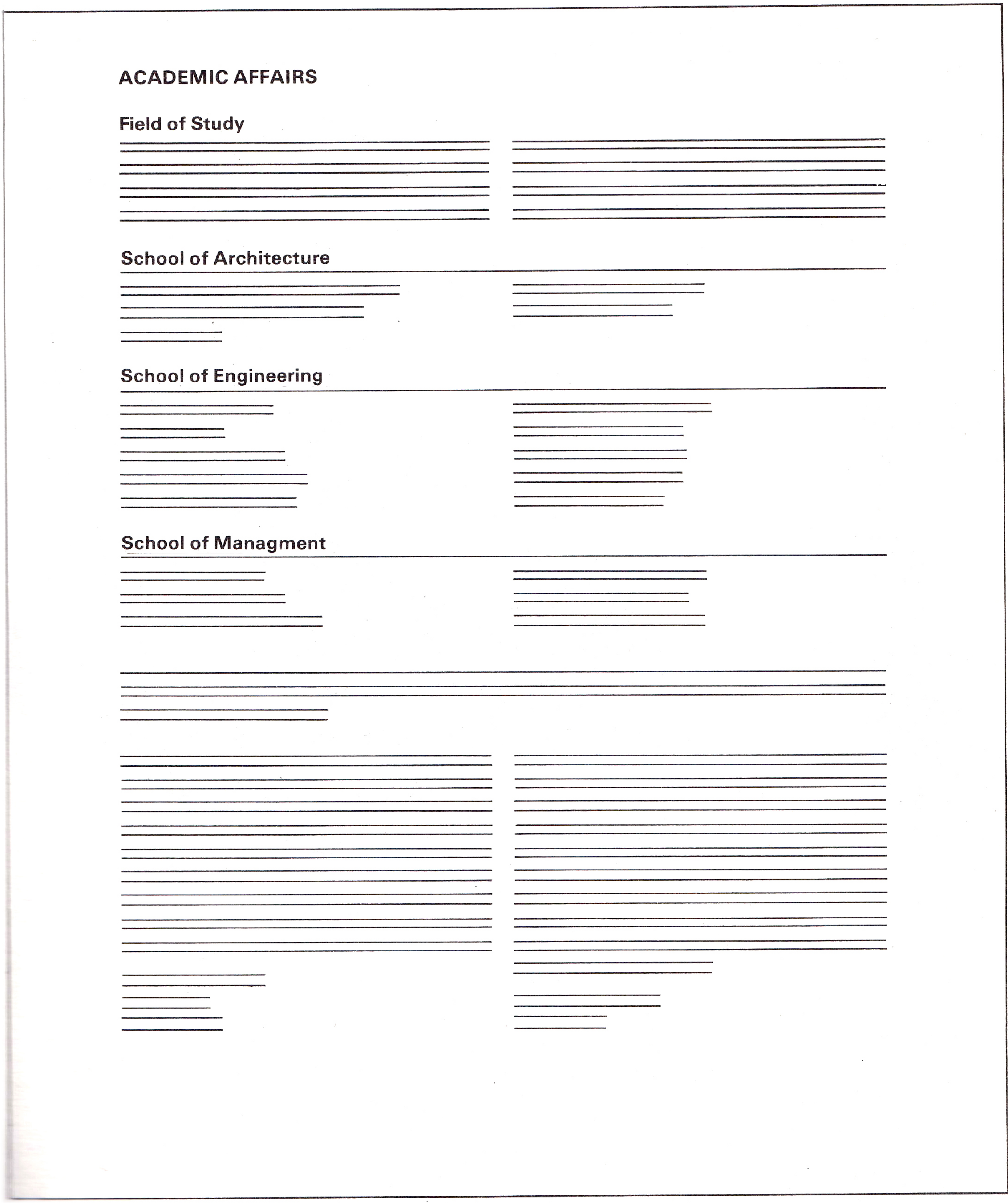
DESIGNER'S LAYOUT



ACADEMIC AFFAIRS

Field of Study

School of Architecture

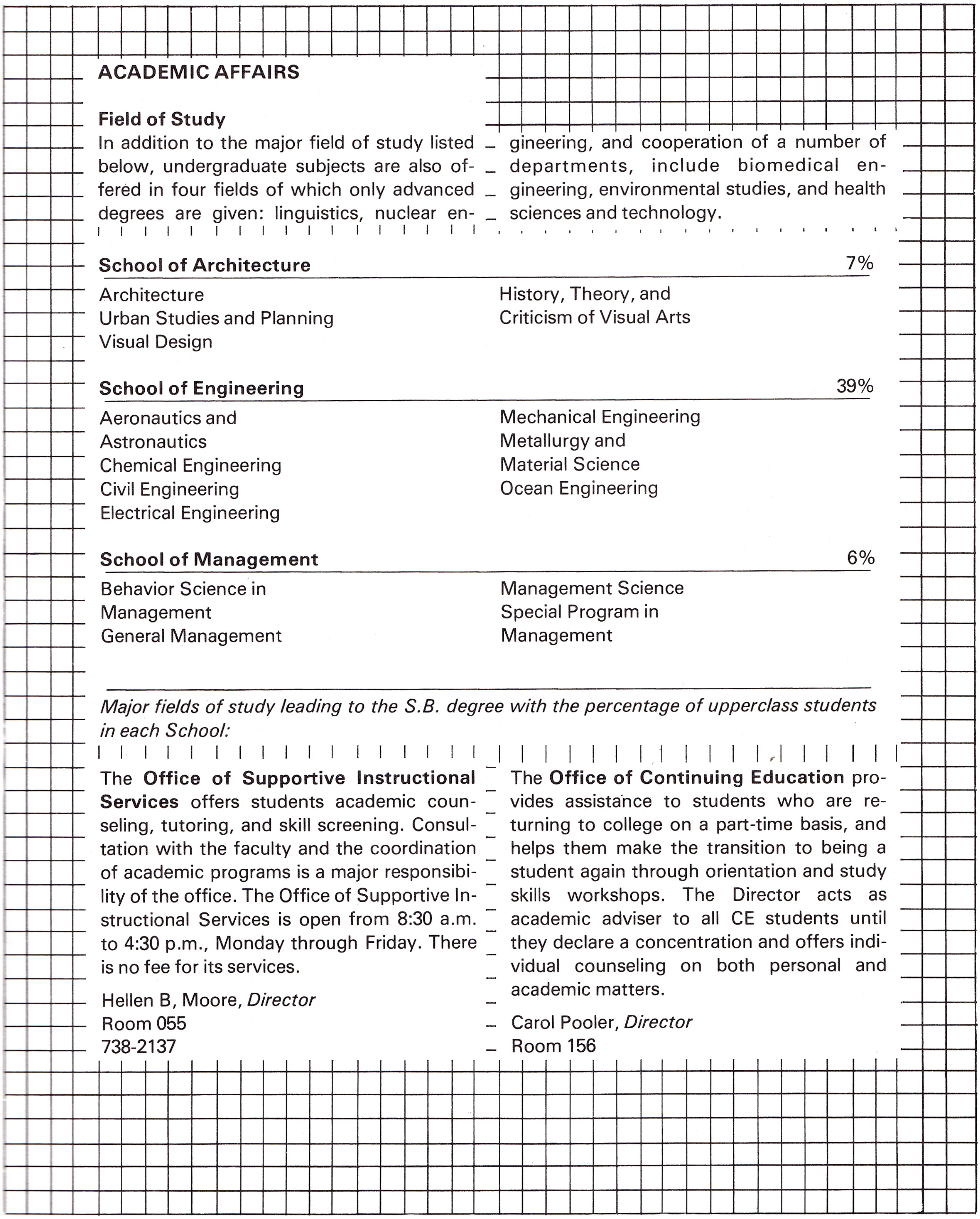
School of Engineering

School of Managment

KEYBOARDING

POWER
OVERSET
DISPLAY
LINE LENGTH
SHIFT

PASTEUP & MECHANICAL



ACADEMIC AFFAIRS

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Behavior Science in Management
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NEGATIVE

ACADEMIC AFFAIRS

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PRINTER'S PLATE

ACADEMIC AFFAIRS

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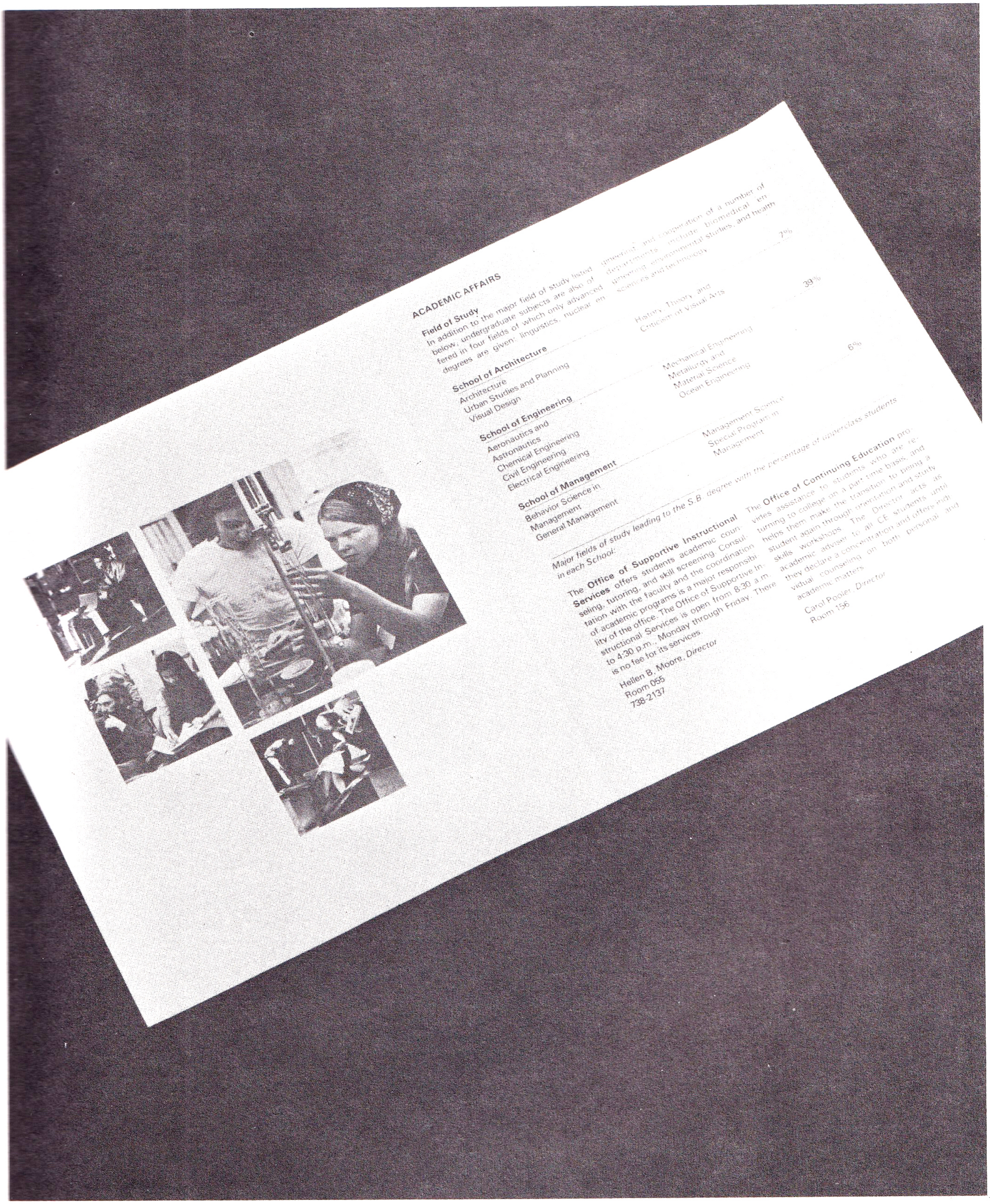

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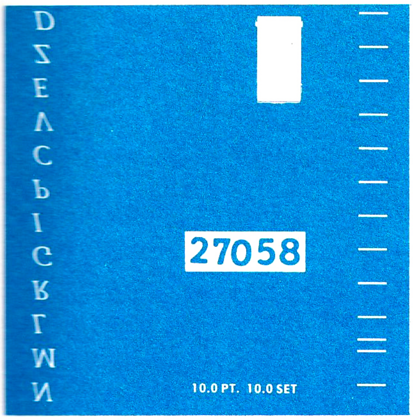
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FILM STRIPS

FILM STRIPS

Type Style

The film strip for the photocomposer is mounted on a revolving drum. It is from images on the film strip that the type characters are exposed. The film strip, made up to standard configurations, has 110 characters in each style. These film strips contain alphabets in both upper and lower case, punctuation, figures and other miscellaneous characters. **All characters on the film strip correspond to those positions shown on the typewriter keyboard.**

Film Strip Identification

Shown on every film strip is the Part Number, style, type size and width (set).

Type-Size

The size of the type is dependent on the Film Strip. The size is indicated on the strip as Point Size. Seven (7) sizes are available and are numbered as follows:

6, 7, 8, 9, 10, 11 and 12

Type Style Width (Set Size)

Since there are many kinds of type styles, the width of the characters will not always be the same. The change of width values in each style and size is referred to as **Set Size.**

In order for the photocomposer to make up the difference in Set Size, a Set Pulley must be installed. The size of the pulley is indicated on the film strip as "Set". Whenever the type style or the type size is changed, the **new width values are obtained by changing the pulley to the new set size.**

This is Roman

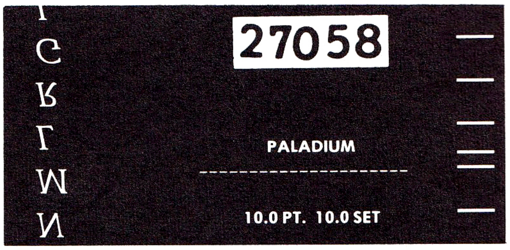
Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the type-writer composer is known as photocomposition.

This is Italic

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the type-writer composer is known as photocomposition.

This is Bold

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the type-writer composer is known as photocomposition.



Size No. 6

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter-composer is generally known as photocomposition. A secretary shift typewriter keyboard provides complete control. Manuscript copy is set to full measures or posi-

Size No. 7

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter-composer is generally known as photocomposition. A secretary shift typewriter keyboard provides complete operator

Size No. 8

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter-composer is generally known as photocomposition. A secretary shift typewriter key-

Size No. 9

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter composer is generally known as photocomposition. A secretary shift

Size No. 10

Typesetting, as used in printing, describes the process of setting and arranging type. The method is generally known as photocomposition. A secretary shift typewriter

Size No. 11

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter-composer is generally known as

Size No. 12

Typesetting, as used in printing, describes the process of setting and arranging type. The method used with the typewriter-composer is

ABCDEFGHIJKLMNOPQRSTUVWXYZ&
abcdefghijklmnopqrstuvwxyz 1234567890

ABCDEFGHIJKLMNOPQRSTUWYZ&
abcdefghijklmnopqrstuvwxyz 123456

ABCDEFGHIJKLMNOPQRSTUVWXYZ&
abcdefghijklmnopqrstuvwxyz 1234567890

Mounting Film Strips

The film strip is mounted on a metal (font) wheel located under the right top cover of the typewriter console. When the cover is raised, the wheel will come to a stop. The film strip is held in place by a retaining spring and sprockets on the wheel. The film strip is installed as follows:

1. Rotate the wheel until the two small spring release arms protruding from the font wheel are accessible.

2. Squeeze the arms with the thumb and forefinger, releasing the pressure on the spring assembly.

3. Holding the film strip in an upright position with character images to the right, place the V-shaped metal clip on top of the film strip over the bottom edge of the font wheel.

   CAUTION: Film strips must be mounted very carefully so that the images are not smudged or scratched.

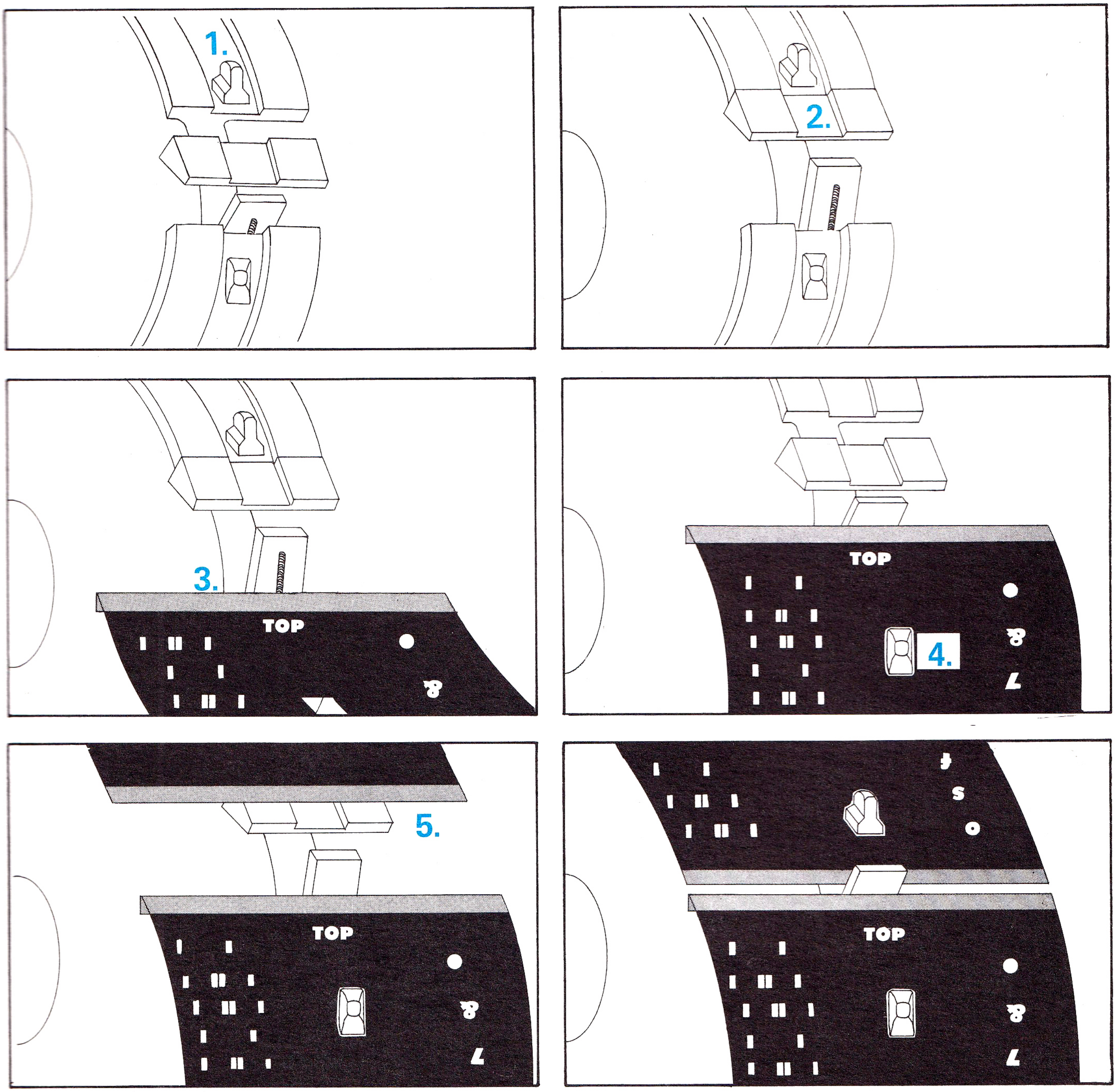
4. Release the spring assembly, which will lock onto the film strip.

5. Rotate the wheel, engaging the center slots of the film strip onto the sprockets of the wheel.

6. When all the slots are engaged, again press the spring assembly and slide the bottom clip of the film strip over the upper edge of the font wheel.

7. Manually rotate the wheel to be sure that the film strip is properly seated.

1. Spring Release Arms
2. Spring Assembly
3. Bottom Edge of Font Wheel
4. Sprockets
5. Upper Edge of Font Wheel


1.
2.
3.
TOP
TOP
4.
5.
TOP
TOP

SET PULLEYS

For the photocomposer to provide correct spacing for typeset characters in different styles and sizes, a Set Pulley, matching the type width (Set Size) must be installed. The correct set width for the style and size of type is indicated on the film strip. The Set Pulley moves a carriage, providing the space for placing each character into the line. The Set Pulley assembly consists of the following:

1. Set Pulley
2. Pinion Drive Pulley
3. Driving Belt
4. Belt Tension Arm

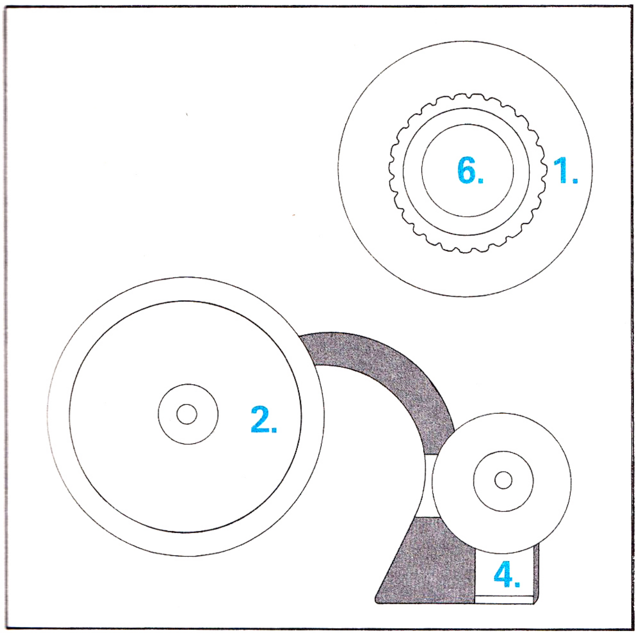
The Set Pulley is the only component that has to be changed in this assembly. The Set value is indicated on the side of each pulley. The values are shown as follows:

5½ Set
6 Set
6½ Set
7 Set
7½ Set
8 Set
8½ Set
9 Set
9½ Set
10 Set
10½ Set
11 Set
11½ Set
12 Set
12½ Set
13 Set

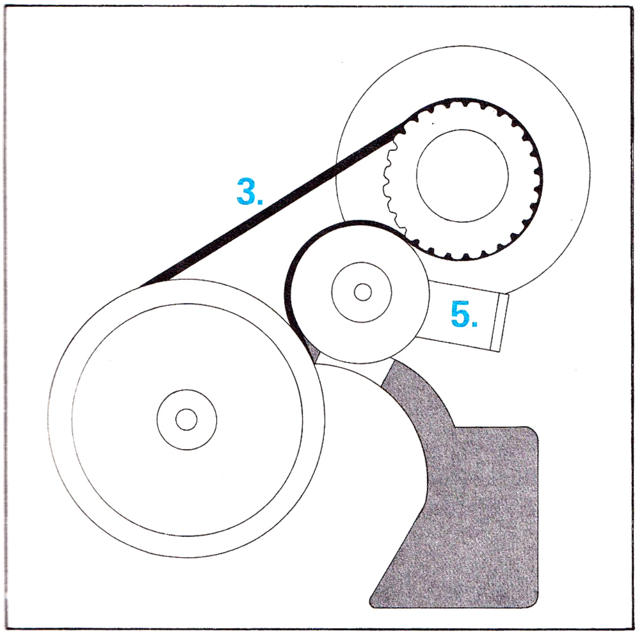
Installing Set Pulleys

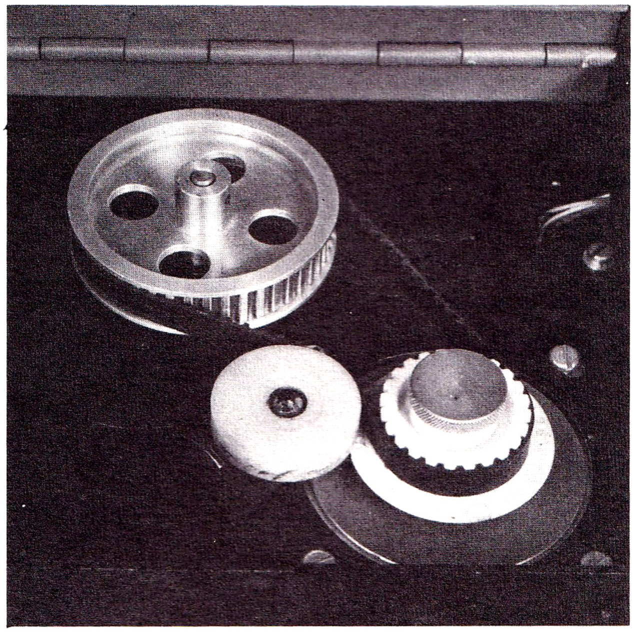
The Set Pulley is installed as follows:

1. Remove the locking thumbscrew from the pulley shaft by turning counter-clockwise.
2. Slide the pulley onto the pulley shaft seating the pulley over the dowel.
3. Replace the thumbscrew and hand-tighten.
4. With the tension arm in the open position (placed to the left), seat the belt over both the pinion drive and set pulley.
5. Close the tension arm by moving it to the right, against the belt.



1. Set Pulley
2. Pinion Drive Pulley
3. Driving Belt
4. Belt Tension Arm (Open Position)
5. Belt Tension Arm (Closed Position)
6. Locking Thumbscrew



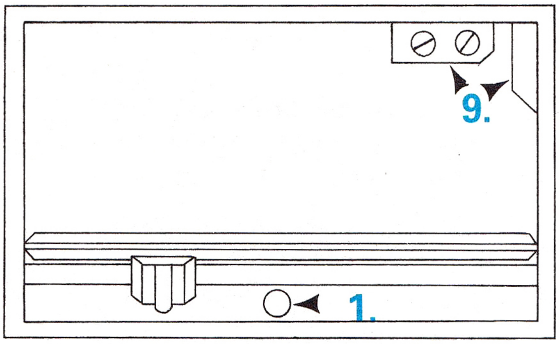


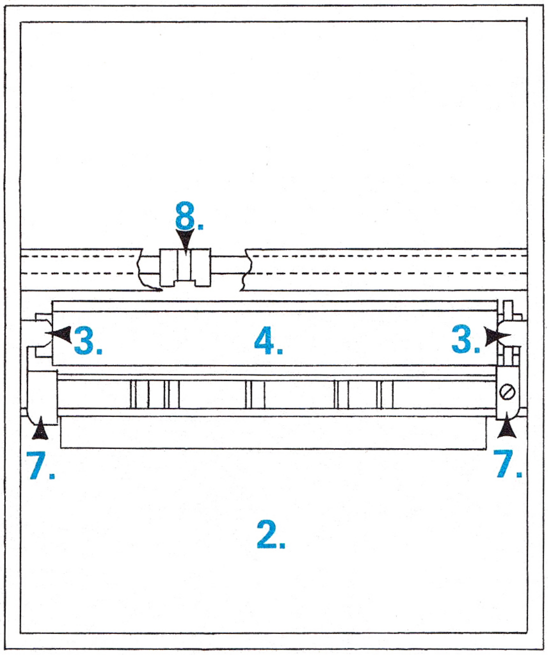
PHOTOGRAPHIC MATERIAL

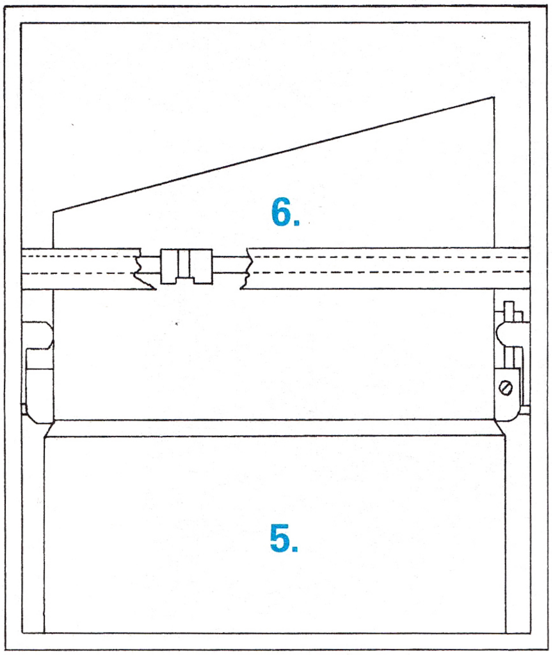
Typed copy can be set on photographic material in widths of 3, 6, and 8 inches.

Installing Photographic Material

1. Open the top left cover of the console.
2. Press the lower compartment door latch release button in front of the compartment.
3. Open the lower compartment cover.
4. Pull out the left and right roller tension arms. This will release the pressure between the rubber rollers.
5. Remove the tape from the box of photographic material. Pull out approximately an 8 inch lead. It should flow freely from the box. Cut the lead on an angle for feeding between the rollers.
6. Place the box of material into the lower compartment with the lead coming from the top.
7. Slide the lead up and between the first and second rubber roller of the assembly and through the top guide. Pull the lead through to be sure it will flow freely. Align the material against the lower compartment left and right guides.
8. Close the left and right tension arms (push in).
9. Start the machine by pressing the power switch on the left side of the console.
10. Activate the Red Continuous Paper Feed key on the typewriter. The material should feed evenly up through the guide.
11. Close the lower compartment door.
12. Cut off the lead with the cutter, sliding it all the way across the bar. The cutter should be placed to the extreme left or right margin to prevent the material from jamming.
13. Place the receiving cassette into the top compartment between the cassette guides. The cassette fits over the opening of the top guide.
14. Close the top cover.
15. Advance the material with the Continuous Paper Feed for approximately 5 seconds to clear any exposed area on the paper.







1. Door Latch Release Button
2. Lower Compartment
3. Roller Tension Arms
4. Rubber Roller
5. Photographic Material
6. Material Lead Cut at Angle
7. Guides
8. Cutter
9. Cassette Guides

Changing Material Widths

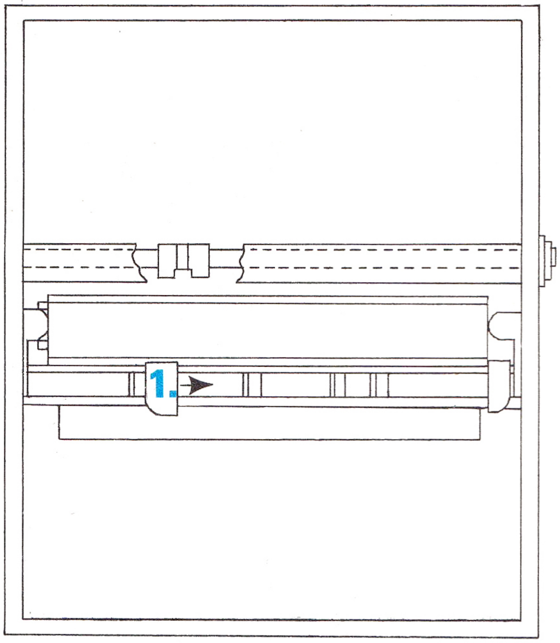
When changing photographic material to a different width, the moveable left margin guide, located in the Material Transport Assembly, must be adjusted to the new size.

Pressing down on the left margin guide will permit sliding the guide into a slot, adjusting it to the new width.

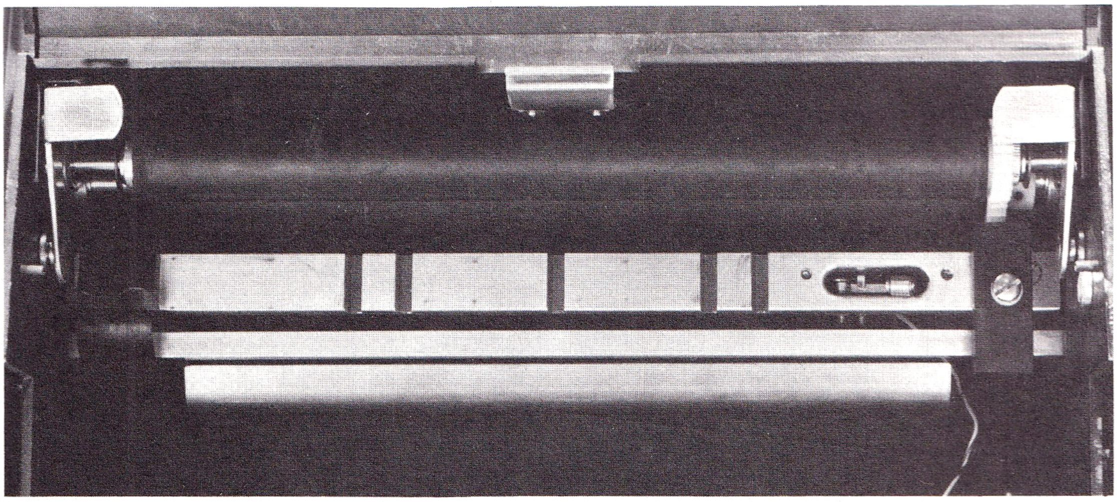
Photographic material in widths of 3, 6, and 8 inches can be used.

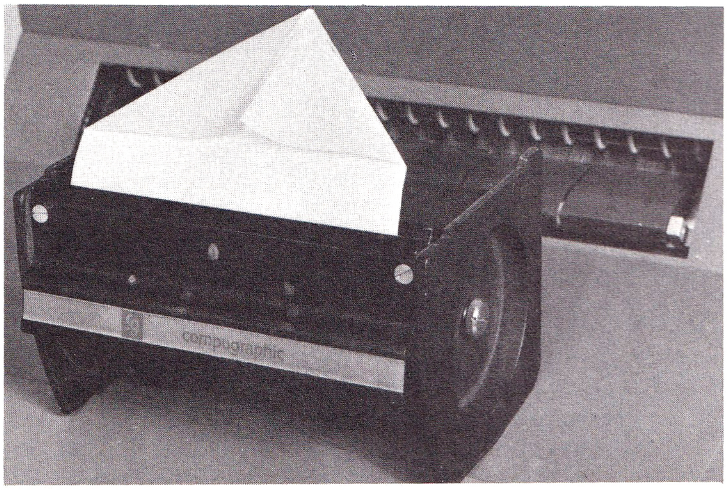
Processing Photographic Material

During typesetting operation, the photographic material is fed into a light-proof cassette. The material is automatically advanced, each time a line is typed, by the amount of line space selected on the console. After completion of the typesetting operation, the material must be further advanced to place the last lines of the typeset copy into the cassette. This is accomplished by holding down the Red Continuous Paper Feed key for approximately 5 seconds. The paper is then cut off with the built-in cutter located in the Material Transport Assembly. The cassette is then removed and the material developed through a processor.



1. Left Margin Guide

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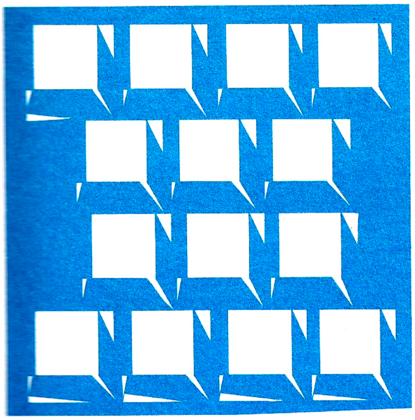


KEYBOARD FUNCTIONS

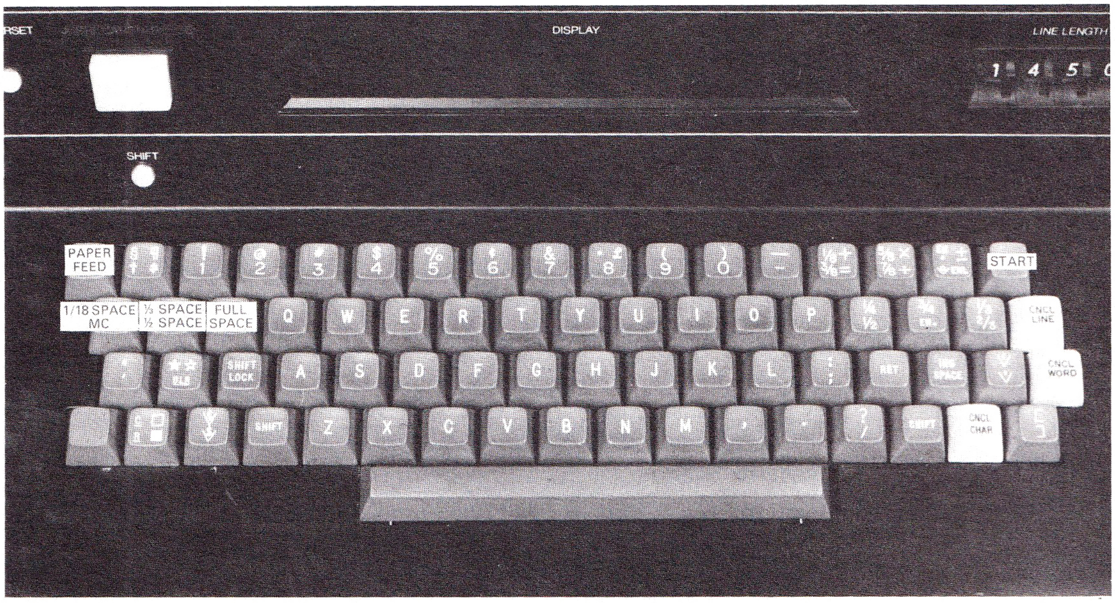
EXECUWRITER KEYBOARD

With the exception of additional characters and functions, the keyboard is like a standard typewriter. Capital or upper case letters are accessed by the Shift key, with the Shift condition indicated by a light on the Control Panel. When the Shift key is released, the keyboard returns to lower case and the light goes out. A Shift Lock key is provided for setting all cap characters. The character images for both Shift and Unshift positions are shown on the keytops. Keytop images are identical to characters on the film strip.

Character Display

When keyboarding, characters and functions will be indicated on the Control Panel's Visual Display.

A Shift or Unshift condition for characters will be indicated by an arrow pointing **"Up" for Upper Case** and **"Down" for Lower Case.** If, during corrections, characters or words are cancelled, they will be removed from the display.


DISPLAY
LINE LENGTH
SHIFT
PAPER FEED
1/18 SPACE MC
⅓ SPACE ½ SPACE
FULL SPACE
START
CNCL LINE
CNCL WORD
CNCL CHAR

SHIFT AND UNSHIFT

KEYBOARD FUNCTIONS

Start

When pressed, the "Start" function **clears** the photocomposer and resets the functions as fixed on the Control Panel. The conditions will be as follows:

a. Unshift (Lower Case)
b. Line Measure as set on the Control Panel
c. Line Space as set on the Control Panel

The machine should be cleared before typesetting manuscript copy.

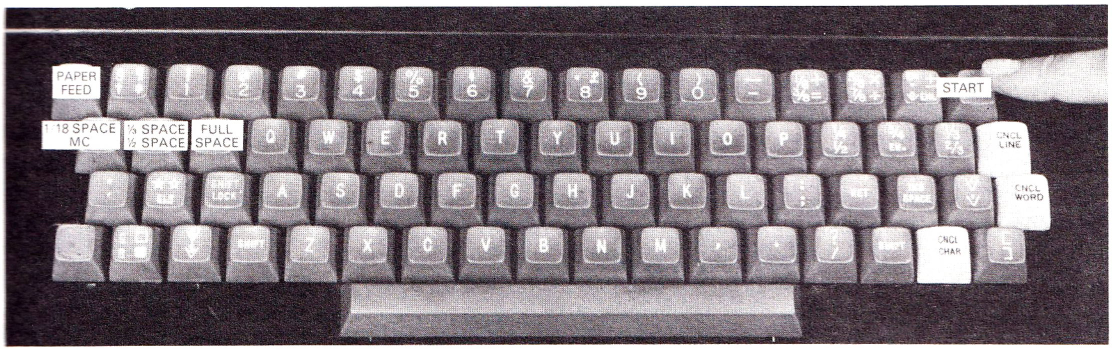
Paper Feed

The "Paper Feed" key, **while pressed,** advances the photographic material. It is used when loading the paper, and **prior to and after** completion of typesetting manuscript copy.

When loading or removing the photographic material, some portion of the paper will be exposed to the light. To be sure that typeset copy will not be set on an exposed area, the Paper Feed function should be activated for approximately five (5) seconds before keyboarding. It should also be activated before removing the cassette for processing. This will advance the last lines of typeset copy into the light proof cassette for developing.

Style Change

Type styles are inserted by changing the film strip. The change can be made **without exposing** any previously set type.


PAPER FEED
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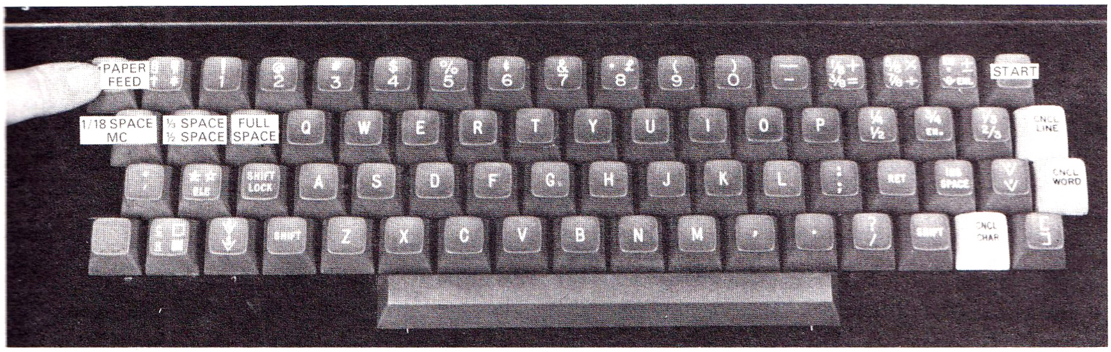
1/18 SPACE MC
⅓ SPACE ½ SPACE
FULL SPACE
CNCL LINE
CNCL WORD
CNCL CHAR


PAPER FEED
START
1/18 SPACE MC
⅓ SPACE ½ SPACE
FULL SPACE
CNCL LINE
CNCL WORD
CNCL CHAR

Right Margin Range

When setting manuscript copy on the photocomposer, Line Lengths, depending on composition arrangements, will vary. When a Line Length is changed, only the Right Margin is affected, the Left Margin is fixed and is the starting position for all lines. The Right Margin must be indicated in order to inform the operator when to end the line. The following two distinct warnings are given to indicate line endings.

Right Margin Light

The Right Margin Range light is activated when the expansion value of the space bar(s) are equal to or greater than the remainder of space in the line. When the light is lit, striking the Return key, evenly spaces the line from the left to right margins for a justified line. The more space bars inserted into the line, the sooner the Range Light will be activated.

Right Margin Audio

Although the Right Margin Range light indicates that there are enough space bars to expand word space from the left to right margins, ending the line at this point would often place too much space between words.

To eliminate wide word space, a second line ending indication is given. This is an audible tone, signifying that the line has been filled to within three (3) full spaces (six average characters) of the right margin. This remainder allows for hyphenation and/or completion of a word before ending the line with the Return. There will also be lines when both the light and audio tone will be activated simultaneously.

Limit Indicator (Overset)

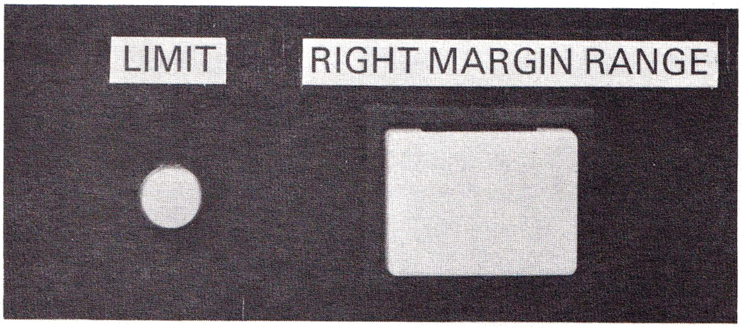
When keyboarding more characters and spaces than the line length can hold, an overset condition will result. The condition will be shown by the Limit Light and keyboarding will be stopped. If the overset condition occurs in a word that can be hyphenated, simply Cancel Characters to a hyphenation point, insert a hyphen and end the line by striking Return. The overset condition can also be cleared by Cancel Word, Cancel Line or striking Start.

LEFT MARGIN 24 PICA MEASURE RIGHT MARGIN

When setting manuscript copy on the photocomposer, Line Lengths, depending on composition arrangements, will vary. When a Line Length is changed, only the Right Margin is affected, the Left Margin is fixed and is the starting position for all lines.

LEFT MARGIN 18 PICA MEASURE RIGHT MARGIN

When setting manuscript copy on the photocomposer, Line Lengths, depending on composition arrangements, will vary. When a Line Length is changed, only the Right Margin is affected, the Left Margin is fixed and is the starting position for all lines.



SPACE KEYS

Space Bar

The Space Bar, as on a typewriter, is used to place space between words. Word space on a typewriter is a fixed width value, therefore, line endings on the right margin will vary, depending on the amount of manuscript copy in a line.

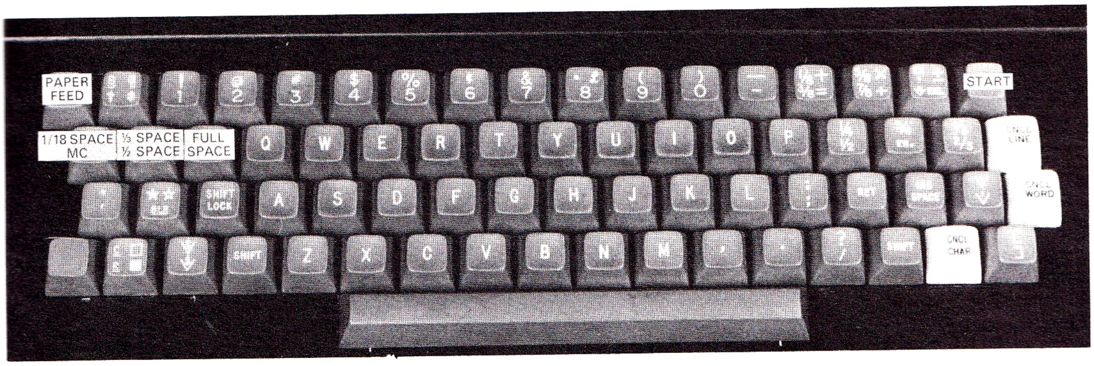
The word space on the photocomposer begins as a fixed width value, but is expandable. The word space when required to do so, will expand in equal amounts until the words fill the line from the left to right margins of the selected line measure. This occurs when a line of text is ended with the Return key. It is referred to as being set ''justified''.

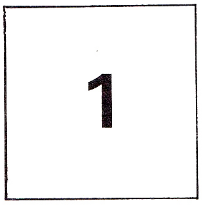
Full Space

The Full Space is a **fixed width value in that it equals the Set Size** indicated on the film strip. That is, it is always in proportion to the type set size. It is referred to as the ''Em Space'' and is used for paragraph indentions and alignment of text. The Full Space is equal to the width of the fractions, rules (__), box (□), bullet (•), and other miscellaneous characters.

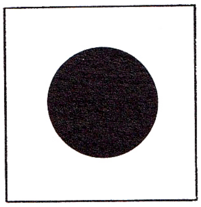
Half Space

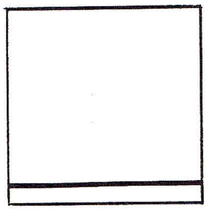
The Half Space, as the name implies is half the value of the Full Space. It is a fixed amount and **equals the width value of the figures** (numerals). It is referred to as the ''En Space'' and is used for indentions and alignment of figures when setting listings. The Half Space is also equal to the width of the dollar ($), Asterisk (*), section marks (§) and other miscellaneous characters.

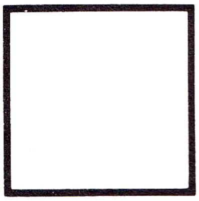

PAPER FEED
1/18 SPACE MC
⅓ SPACE ½ SPACE
FULL SPACE
Q
W
E
R
T
Y
U
I
O
P
SHIFT LOCK
A
S
D
F
G
H
J
K
L
SHIFT
Z
X
C
V
B
N
M
SHIFT
START
CNCL LINE
CNCL WORD
CNCL CHAR

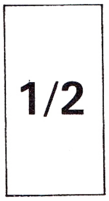


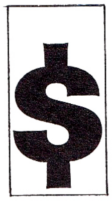
FULL SPACE


BULLET

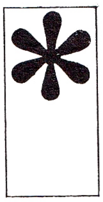

RULE

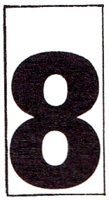

BOX

HALF SPACE




DOLLAR

ASTERISK




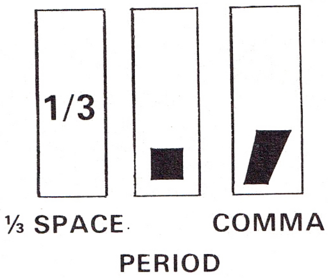
NUMBER

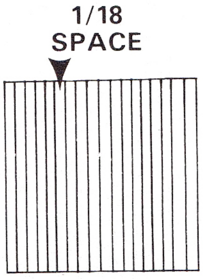
One-Third Space

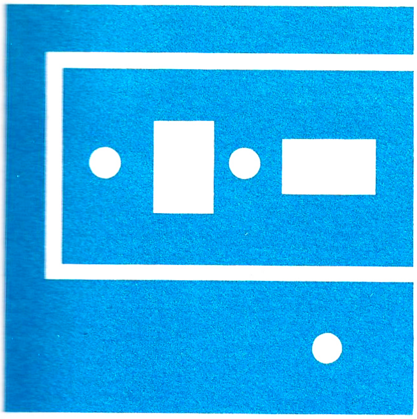
This space is one-third the value of the Full Space. It is a fixed amount and is referred to as the ''Thin Space''. The one-third space has the **width value of the comma and the period.** It is used for indentions and alignment of figures when the columns contain the period and/or comma.

1/18th Space

The 1/18th Space is the smallest space value that can be obtained from the keyboard. It is a fixed amount in that it is always 1/18th the value of the Full Space in the selected Set Size. The 1/18th space is used for the manual letterspacing of words for better appearance. It can also be used for indentions or alignment.


1/3
⅓ SPACE
COMMA
PERIOD


1/18
SPACE



CONTROL PANEL

CONTROL PANEL

The Control Panel consists of a Power Supply Switch, Character Display, Warning Lights for operating conditions and typesetting functions for Line Length and Line Space.

On

The "On" button, when pressed, provides power to the system, indicated by a light. It is recommended that the photocomposer be turned on for a **five minute warmup** period before operation.

Character Display

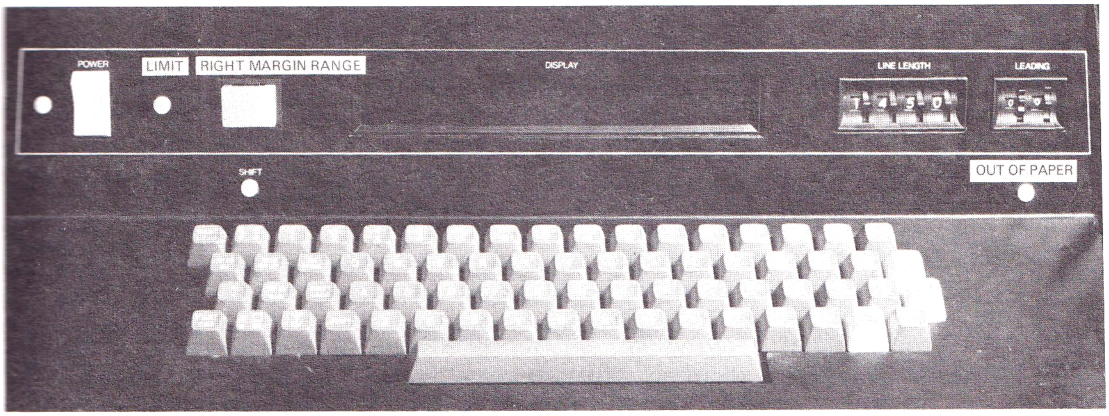
While keyboarding, characters and functions will be seen on the visual Character Display. All alpha characters will be shown in capital letters only. When there is more than one image represented on the key position, only the image in the lower case position will be indicated. A Shift or Unshift condition for all characters will be shown by an Arrow pointing **"Up" for Upper Case,** and **"Down" for Lower Case.** As characters are added to line, they are stepped across the screen. After 32 characters are typed, the first individual images will disappear. During corrections, when characters, words, or functions are cancelled, they will be removed from the display.

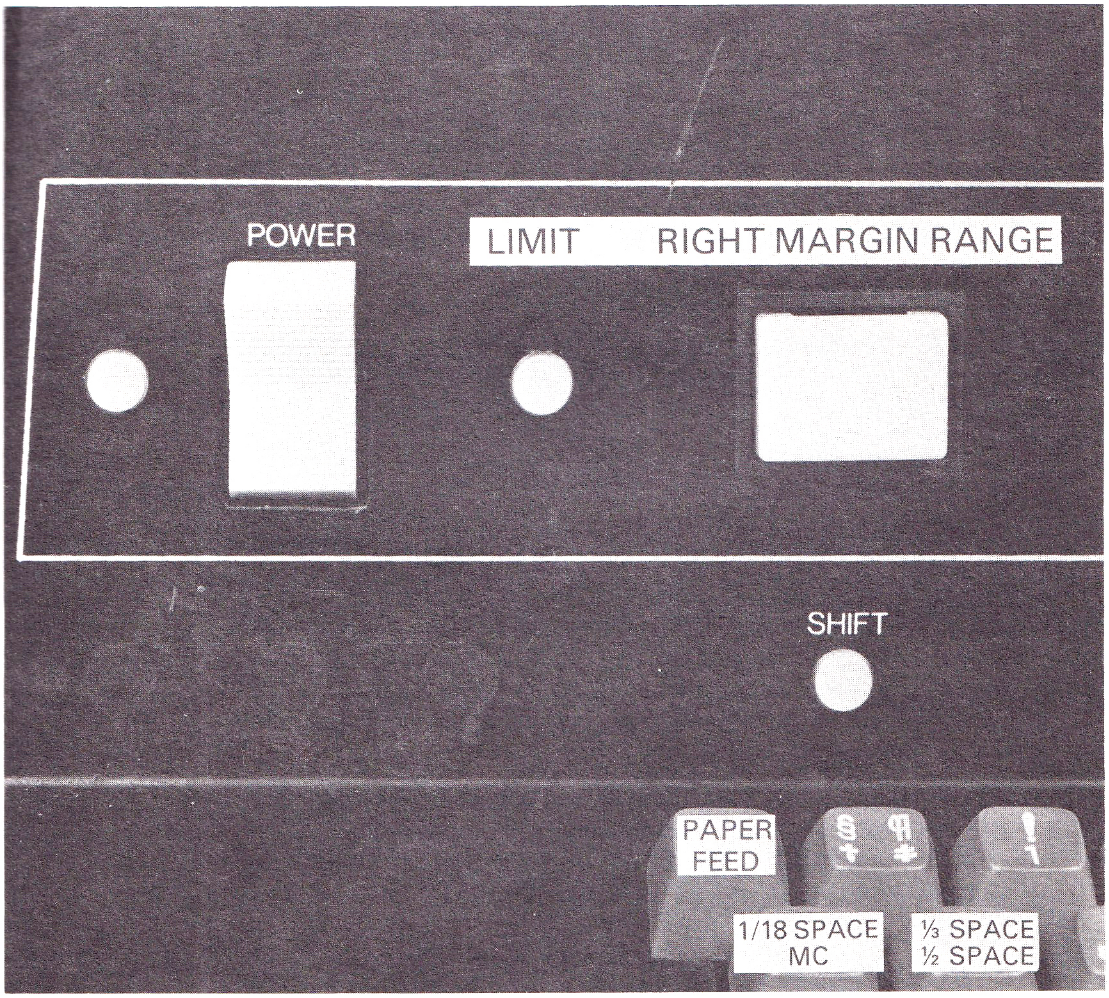
Shift Indicator

The Shift light, indicates that typed characters will be in the Upper Case (caps) position. The light will remain lit when the typewriter Shift Lock is on. The light goes out in the Unshift (lower case) condition.

Out Of Paper Indicator

This light indicates depletion of photographic material. When lit, the keyboard will not operate.


POWER
LIMIT
RIGHT MARGIN RANGE
DISPLAY
LINE LENGTH
LEADING
SHIFT
OUT OF PAPER


POWER
LIMIT
RIGHT MARGIN RANGE
SHIFT
PAPER FEED
1/18 SPACE MC
⅓ SPACE ½ SPACE

Line Length

Variable Line Length values from 0 to 7½ inches (45 picas) can be selected by the **Four Thumb Wheel Switches** on the Control Panel. The value is obtained by converting picas to machine units with the unit values indicated on Line Length Charts. The Line Length is inserted as follows:

STEP 1

Turn to the Line Length Charts on Pages 137-138.

STEP 2

Find the set value that is compatible with the type style.

STEP 3

Under the "Pica" column, find the correct pica measure.

STEP 4

Cross reference the set value with the pica measure. Where the two values intersect indicates the Line Length unit value.

STEP 5

Rotate the Thumb Wheel Switches by pressing the dials until they equal the Line Length unit value (either direction).

STEP 6

Pressing the Start key activates the new measure.

Line Space

Line Space, similar to the typewriter, is the vertical advancement of paper to allow space for setting a new line. **The type size is the determining factor** when selecting Line Space. Line Space is normally **equal to, or larger than, the type size.**

Line Space, **activated by the Return key,** is the last function in a line. It is commonly referred to as "Leading" (pronounced ledding). The Line Space is calculated from baseline to baseline of the type style. When the Line Space equals the type size, it is described as being "Set Solid". If the Line Space is larger than the type size, the type is referred to as being "Leaded".

The value of Line Space is **specified in Points.** Both points and half point values can be selected on the Line Space Thumb Wheel Switches to a maximum of 15½ points. Line Space is inserted as follows:

STEP 1

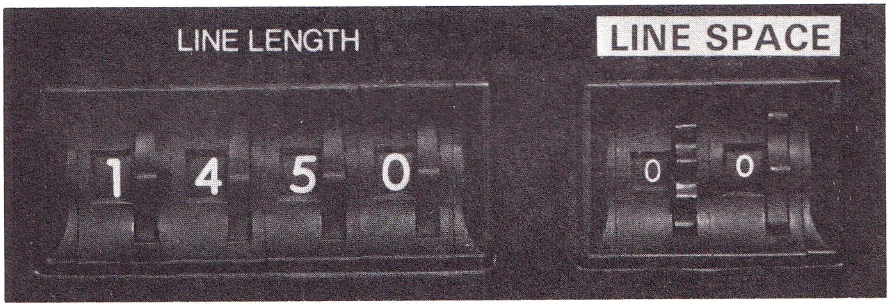
Dial the Thumb Wheel Switches to the desired Line Space.

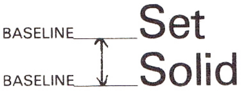
STEP 2

Activation of the Return key advances the photographic paper by the amount selected on the Line Space dials.

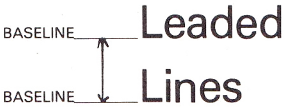
SET SIZE

PICAS	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13
36.0	2606	2420	2254	2127	2015	1714	1623	1540	1463	1412	1345	1303	1244	1210	1156	1126
36.5	2631	2442	2275	2146	2033	1732	1640	1554	1476	1424	1357	1315	1256	1221	1167	1136
37.0	2655	2464	2316	2166	2052	1747	1654	1570	1511	1437	1371	1327	1267	1232	1177	1147
37.5	2701	2506	2336	2205	2070	1765	1671	1604	1525	1452	1403	1340	1300	1243	1210	1157
38.0	2724	2530	2357	2225	2106	2002	1706	1620	1540	1465	1416	1352	1312	1254	1221	1167
38.5	2750	2552	2377	2244	2125	2020	1722	1634	1553	1500	1430	1364	1323	1265	1231	1200
39.0	2774	2574	2420	2263	2143	2035	1737	1650	1567	1512	1442	1376	1335	1276	1242	1210
39.5	3017	2616	2441	2303	2162	2053	1754	1664	1602	1525	1455	1410	1346	1307	1253	1220
40.0	3043	2640	2461	2322	2200	2070	1770	1700	1615	1540	1467	1421	1357	1320	1263	1231
40.5	3067	2662	2502	2342	2216	2106	2005	1714	1631	1553	1501	1433	1371	1331	1274	1241
41.0	3112	2704	2522	2361	2235	2123	2022	1730	1644	1566	1513	1445	1402	1342	1304	1251
41.5	3136	2726	2543	2401	2253	2141	2037	1744	1660	1600	1526	1457	1413	1353	1315	1262
42.0	3161	2750	2564	2420	2272	2156	2053	1760	1673	1613	1540	1471	1425	1364	1326	1272
42.5	3205	2772	2604	2437	2310	2174	2070	1774	1706	1626	1552	1503	1436	1375	1336	1302
43.0	3231	3014	2625	2457	2326	2211	2105	2010	1722	1641	1565	1514	1450	1406	1347	1312
43.5	3254	3036	2646	2476	2345	2227	2121	2024	1735	1654	1577	1526	1461	1417	1360	1323
44.0	3300	3060	2666	2516	2363	2244	2136	2040	1750	1666	1611	1540	1472	1430	1370	1333
44.5	3324	3102	2707	2535	2402	2262	2153	2054	1764	1701	1623	1552	1504	1441	1401	1343
45.0	3347	3124	2727	2555	2420	2277	2170	2070	1777	1714	1636	1564	1515	1452	1412	1354





Line Space, similar to the typewriter, is the vertical advancement of paper to allow space for setting a new line. The type size is the determining factor when selecting Line Space. Line Space is normally equal to, or larger than, the type size.



Line Space, similar to the typewriter, is the vertical advancement of paper to allow space for setting a new line. The type size is the determining factor when selecting Line Space. Line Space is normally equal to, ot larger then, the type size.

MARK-UP

MARKUP

To aid the operator while keyboarding, preparation of the manuscript copy is recommended. Copy preparation is often referred to as ''Markup''. The markup of manuscript copy will depend on the style of composition to be set. The factor for line measure, type style, type size, line space, indentions and margin positions should be clearly defined. A rough illustration or layout, is useful for showing the approximate position of the type and the overall effect.

Manuscript copy should be typed and double-spaced. It is important that spelling, punctuation, capitalization and uniformity of style be carefully checked on the manuscript copy. This will insure correct composition with a minimum of time.

Although the markup for the following exercises pertains to the variation of styles, the complimentary film strip that accompanies each machine can be used. The film strip will be a style called ''English'', Roman, Size No. 10.

Markup of Exercises

All markup for the exercises in this manual is shown as follows:

X21	Represents the Line Length (measure in picas).
(10)	Represents the type size in Points.
1-2-3	Represents type style (One, Two, Three).

Style 1 — Set Roman — Compugraphic

Style 2 — Set Italic — *Compugraphic*

Style 3 — Set Bold — **Compugraphic**

/12	Represents Line Space (Leading).
12/24	Represents Line Space and additional space between paragraphs or blocks of copy.

Compugraphic — Set All Caps

FL — Set copy Flush Left on margin

FR — Set copy Flush Right on margin

Just. — Set copy margin to margin (justified)

$\boxed{1}$ — Full Space

Note: If positioning for the manuscript copy is not indicated, those lines will be set **centered.**

Example: Markup of a Paragraph

The copy shown below is marked to be set justified, on a 21 pica line length. The type size will be No. 10 in typeface style No. 2 (Italic). The paragraph will start with one Full Space, as indicated with the box. The Line Space is indicated on the right margin of the manuscript with a slash (/10).

Just. X21

(10)-2 $\boxed{1}$ The point and the pica are the /10
two units of measure used in
printing. The point system is
not only used to measure type
size, it is used to markup the
manuscript copy for the typesetter.

Example: Markup for Flush Left Composition

The copy shown below is marked up to be set Flush Left on the margin with an 18 pica line length. The type size is No. 9 in typeface style 3 (Bold). The "FL" indicates that copy is to be set on the left margin. The 3 solid lines of underscore indicate an all cap line. The Line Space is 10 points with an additional Line Space between subjects for a total of 20 points.

FL X18

(9)-3 TYPE COMPOSITION

Composition, typography and 10/20
typesetting are various terms
which are used to process the
setting and arranging of type.

ART COPY PREPARATION

Art copy is the term used to 10/20
describe illustrations, photographs and art subjects in
typesetting.

KEYBOARDING PROCEDURES

OPERATING PROCEDURES

Preliminary

STEP 1

Load the system with paper photographic material as described on page 23. Remember to install the receiving cassette into the top compartment.

STEP 2

Mount the complimentary film strip that accompanies the machine. The style will be English in size No. 10. Note the value of the Set Size (Set Pulley Size) indicated on the film strip label.

STEP 3

Install the appropriate Set Pulley as described on page 21 for the English type style.

STEP 4

Insert the line measure for setting the following manuscript copy. (Page 55.) This is accomplished by referring to the Set Size and the Line Length Charts on pages 137-138.

STEP 5

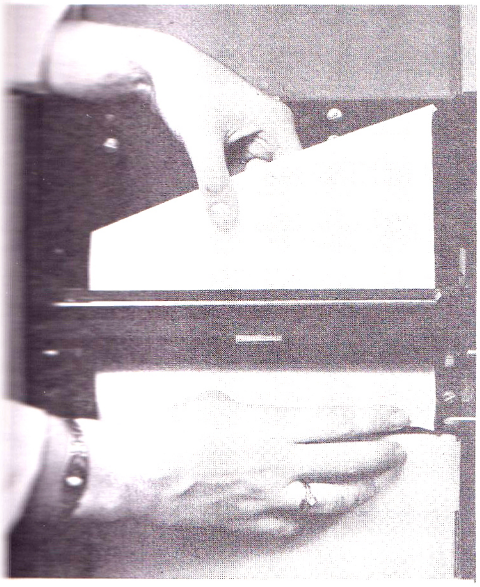
Insert the Line Space by dialing the Line Space switches to the proper value. Remember that Line Space should be equal to or larger than the type size.

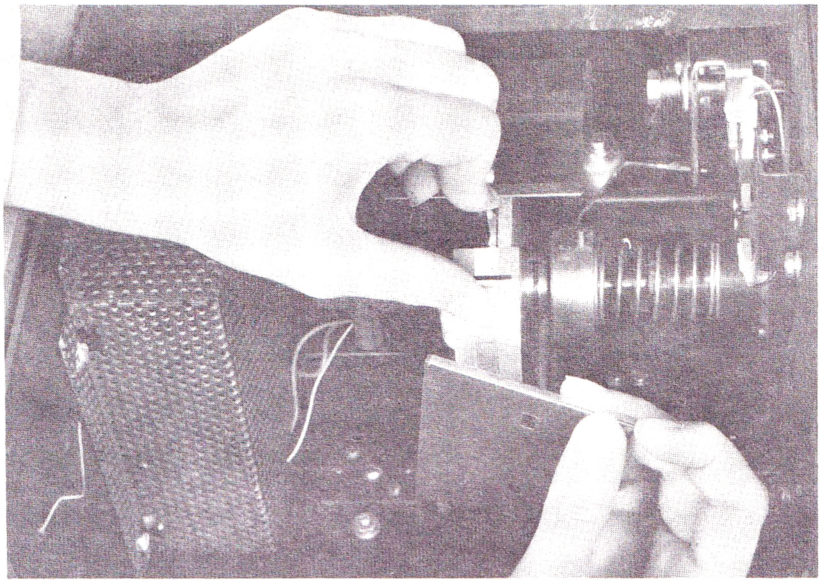
STEP 6

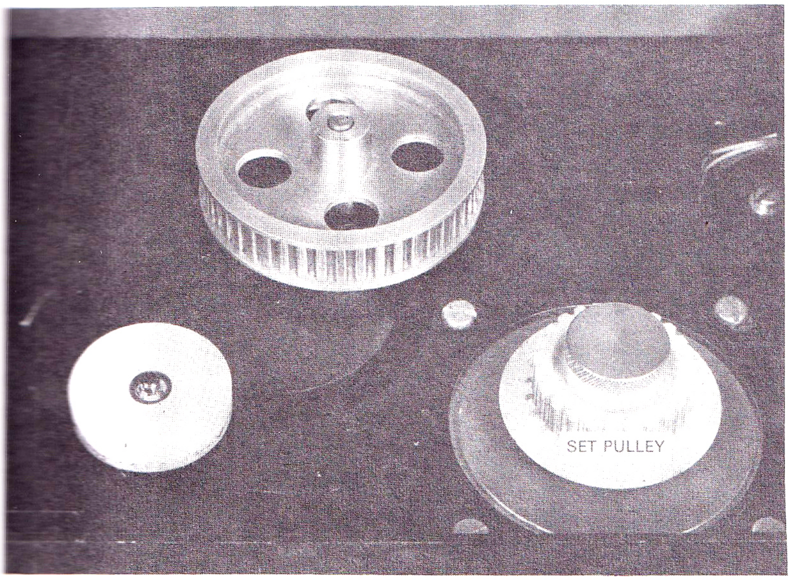
Strike the ''Start'' button on the keyboard. This will clear the system, locking in the Line Measure, Line Space, and restore a Lower Case condition.

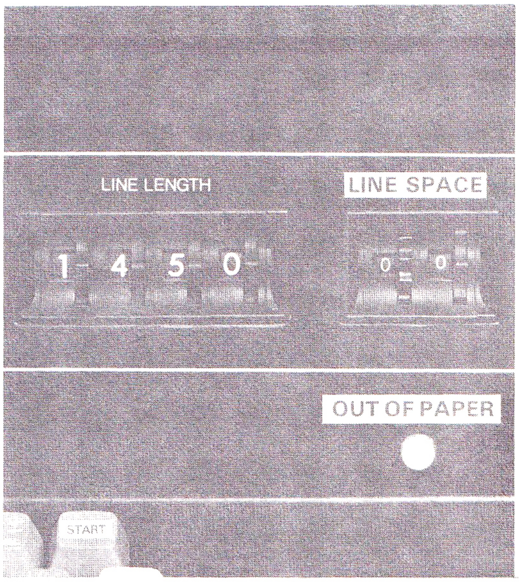
STEP 7

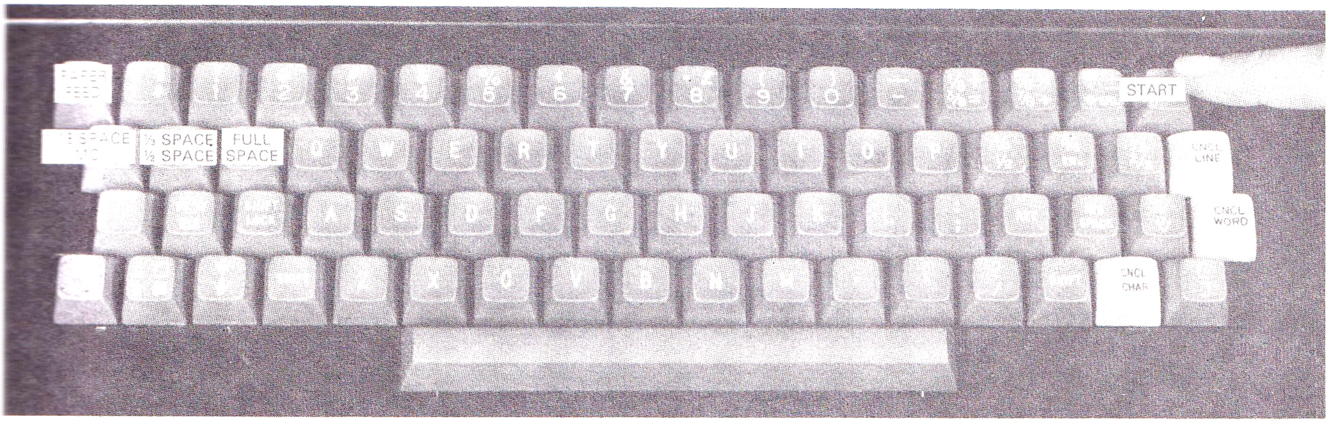
Advance the photographic paper by pressing the Paper Feed key for approximately 5 seconds. This will clear any previously exposed paper. Commence with typesetting procedures that follow.






SET PULLEY


LINE LENGTH
1 4 5 0
LINE SPACE
0 0
OUT OF PAPER
START


PAPER FEED
½ SPACE
½ SPACE
FULL SPACE
START
CNCL LINE
CNCL WORD
CNCL CHAR

SETTING A PARAGRAPH

When type is arranged in paragraph form, it is normally set to the full measure, that is, from the left to right margins. It is referred to as being justified.

Example: Set the following paragraph as shown:

Just. X21

(10)-1 $\boxed{1}$ The entire appearance of a printed /10
piece can be altered by the selection
of a typeface. Many characteristics
can be suggested by the typeface used.
Delicacy, formality, femininity, mas-
culinity, can all be suggested by the
proper style. Remember that type is
designed for easy reading. Also im-
portant to the appearance of a printed
piece is proper line space.

Procedure:

STEP 1

Note the markup for the arrangement, measure, style, size and line space. It is justified, 21 picas, size no. 10, style 1, (Roman), 100 line space (10 points). Verify all function settings before operation.

STEP 2

Type the first line, starting with one Full Space, as indicated for the paragraph indention.

STEP 3

As the line is being typed, the "Right Margin" light will be activated to show that the line can be justified and is close to being filled. Continue typing until the audio line ending tone is activated. At this point, the remaining space will be equal to approximately five average characters. End the line by completing the last word or by insertion of hyphenation if the last word cannot fit into the measure.

STEP 4

Strike the **Return key.** This activates the typesetting of the line and advances the paper providing line space for the next line. Repeat the procedure for each line.

If the last word cannot fit into the measure, this will be indicated by the Overset Light and the keyboard will not operate. Cancel out the last word or the last few characters to a hyphenation point. Insert a hyphen, and end the line with the Return key.

STEP 5

The last line of the paragraph will normally be short of the full measure. It must be positioned flush to the left margin. To position the text on the left margin, the line is ended by striking the Insert Space key prior to ending the line with the Return. That is, **Text, Insert Space, Return.**

Typeset Copy:

The entire appearance of a printed piece can be altered by the selection of a typeface. Many characteristics can be suggested by the typeface used. Delicacy, formality, femininity, masculinity, can all be suggested by the proper style. Remember that type is designed for easy reading. Also important to the appearance of a printed piece is proper line space.

Processing the Typeset Copy

Having completed typesetting the first paragraph, it is now ready for developing.

STEP 1

Advance the paper by holding down the Paper Feed key on the typewriter for approximately 5 seconds.

STEP 2

Open up the top left cover of the photocomposer.

STEP 3

Slide the paper cutter all the way across the paper. Repeat if necessary to be sure the paper has been severed.

STEP 4

Remove the cassette.

STEP 5

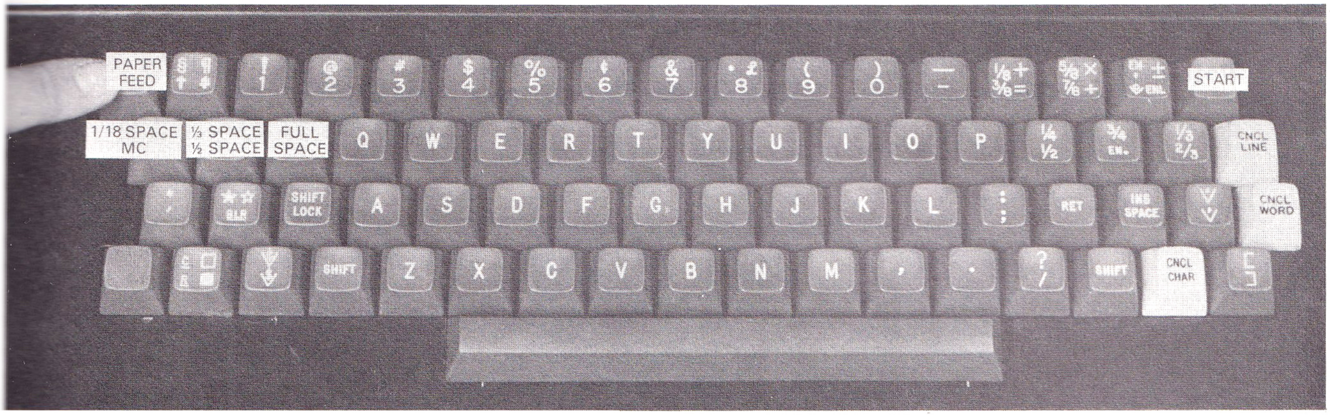
Establish a lead by folding the edge of the paper as shown on page 26.

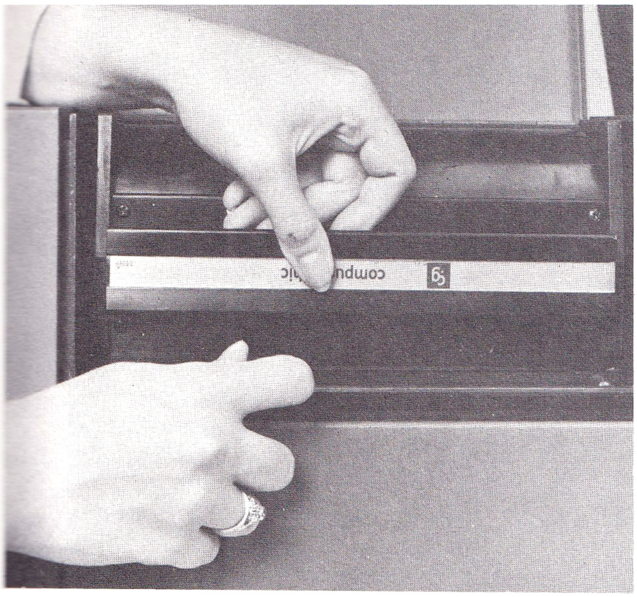
STEP 6

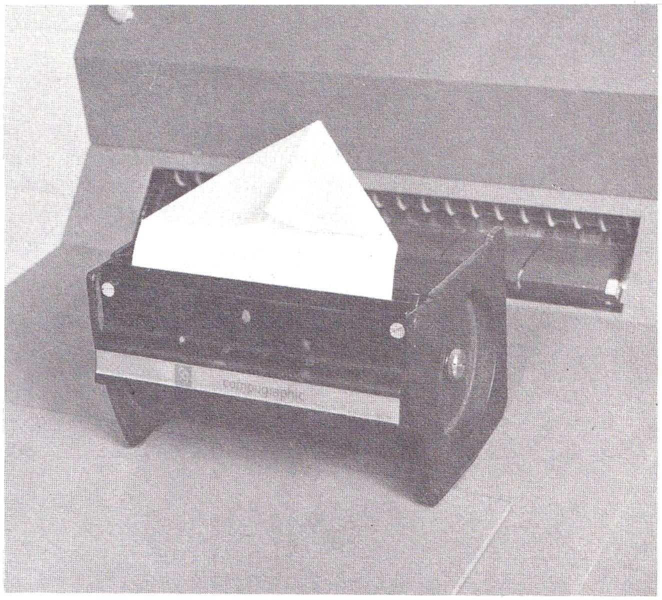
Start the paper through the developing processor.

STEP 7

After the completion of the developing process, the paper should be dry before cutting and pasting.


PAPER FEED
START
1/18 SPACE MC
⅓ SPACE ½ SPACE
FULL SPACE
CNCL LINE
CNCL WORD
CNCL CHAR
SHIFT LOCK
SHIFT
RET
INS SPACE


compugraphic


compugraphic

compugraphic COMPUDRY

Example: Set the paragraph, noting that the text is marked to be set in the Italic typeface (Style No. 2) **The film strip must be changed to obtain the Italic style.**

```
                    Just. X21
(10-2)  1  Type fonts for the ExecuWriter  /10
           are made in seven sizes.  A font
           is defined as a complete assort-
           ment of any one size and style
           containing all the characters
           needed for typesetting. Variations
           in the style family, such as light
           face roman, bold face or italic can
           be obtained.  These variations retain
           the original characteristics of the
           style except for being thicker,
           thinner, or slanted as their names
           imply.
```

Procedure:

STEP 1

Change the type style to Italic (Style 2), by changing the film strip.

STEP 2

Replace the cassette. Advance the paper by holding down the Paper Feed for appriximately 5 seconds.

STEP 3

Strike the Start key, clearing the machine and resetting typesetting functions.

STEP 4

Set the paragraph as previously described. Be sure to start with a Full Space indention and end the paragraph with Insert Space, Return.

STEP 5

Process the typeset copy as before. Remember to advance the paper for approximately 5 seconds.

Typeset Copy:

Type fonts for the ExecuWriter are made in seven sizes. A font is defined as a complete assortment of any one size and style containing all the characters needed for typesetting. Variations in the style family, such as light face roman, bold face or italic can be obtained. These variations retain the original characteristics of the style except for being thicker, thinner, or slanted as their names imply.

Changing The Style To Bold Face

Example: Set the paragraph as shown. Note that a portion of the text is marked to be set in Bold caps. The 3 solid underscores indicates that portion to be set all caps.

Just. X24

(10)-3 2 Capital letters are called upper case /12
and small letters, lower case. In lower
case letters, the upper stroke is called
the ascender and the downward stroke is
known as the descender. The short cross-
line at the end of the main stroke of
the character is called the serif. The
body makes up the largest portion of
the type. The type is measured by the
body size rather than the face size.
The face size is from the top of the
ascending letter to the bottom of the
descending letter. For example, the
face size of 12 point type may measure
only 9 points but will be set in size
No. 12. This allows space between
lines when setting solid spacing.

Procedure:

STEP 1

Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 2

Change the measure to 1006 units (24 picas). Also change the line space to 120 (12 points). Note that the paragraph is to be set with an indent of two Full Spaces.

STEP 3

Strike the Start key.

STEP 4

Type the paragraph as previously described. Where indicated with the underscore, set the words in "upper case" (Caps). Continue typesetting the paragraph. The Bold face is obtained by changing the film strip to Style 3.

STEP 5

Prepare to process the finished paragraph by advancing the paper for 5 seconds into the takeup cassette.

Typeset Copy:

CAPITAL LETTERS are called upper case and small letters, lower case. In lower case letters, the upper stroke is called the ascender and the downward stroke is known as the descender. The short crossline at the end of the main stroke of the character is called the serif. The body makes up the largest portion of the type. The type is measured by the body size rather than the face size. The face size is from the top of the ascending letter to the bottom of the descending letter. For example, the face size of 12 point type may measure only 9 points but will be set in size No. 12. This allows space between lines when setting solid spacing.

Positioning Type on the Left Margin

When type is set flush left on the margin, it is referred to as "Flush Left" composition. All remaining space in the line will be to the right and the copy will have ragged right line endings. Flush left composition is generally shown on the marked up manuscript as (fl).

Example: Flush Left Composition

X18

(10)-3 FLUSH LEFT COMPOSITION /14

(fl) IS POSITIONED WITH

THE INSERT BLANK SPACE KEY

Procedure:

STEP 1
Change the type style to Bold (Style 3).

STEP 2
Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 3
Change the measure to 0605 units (18 picas).

STEP 4
Change the line space to 140 (14 points).

STEP 5
Press the Start key locking in the newly selected functions.

STEP 6
Press the Shift Lock to be sure that the type is set all caps (capital letters).

STEP 7
Set the first line of text "FLUSH LEFT COMPOSITION".

STEP 8

End the line by striking the **Insert Blank Space key and the Return.**

STEP 9

Repeat the procedure for each line.

STEP 10

Prepare to process the finished copy by advancing the paper into the take-up cassette.

STEP 11

Cut off the paper with the cutoff knife and remove the cassette for processing.

Typeset Copy:

FLUSH LEFT COMPOSITION
IS POSITIONED WITH
THE INSERT BLANK SPACE KEY
AND THE RETURN

Positioning Type on the Right Margin

When type is set on the right margin, it is referred to as "flush right" composition. All remaining space in the line will be to the left of the copy. The lens carriage moves right, equal to the value of the remaining space in the line. The line is then photographed and is Flush Right on the measure. Flush right composition is generally shown on the marked up manuscript copy as (fr).

Example: Flush Right Composition

```
                         X18

(10)-3    FLUSH RIGHT COMPOSITION      /14

                  IS POSITIONED WITH

          THE INSERT BLANK SPACE KEY

                     AND THE RETURN
```

Procedure:

STEP 1

Change the type style to Bold (Style 3).

STEP 2

Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 3

Change the measure to 0605 units (18 picas).

STEP 4

Change the line space to 140 (14 points).

STEP 5

Press the Start key locking in the newly selected functions.

STEP 6

Press the Shift Lock to be sure that the type is set all caps (capital letters).

STEP 7

Strike the **Insert Blank Space key.** Set the first line of text "FLUSH RIGHT COMPOSITION".

STEP 8

End the line by striking the **Return.**

STEP 9

Repeat the procedure for each line.

STEP 10

Prepare to process the finished copy by advancing the paper into the take-up cassette.

STEP 11

Cut off the paper with the cutoff knife and remove the cassette for processing.

Typeset Copy:

FLUSH RIGHT COMPOSITION
IS POSITIONED WITH
THE INSERT BLANK SPACE KEY
AND THE RETURN

Centering on the Line Measure

The Insert Blank Space is also used to Center the typeset copy on the selected line measure. The line is centered by moving the carriage half the value of the remaining space in the line. The line is then photographed leaving the other half of remaining space.

Example: Centering the Manuscript Copy

```
                          X21
(10)-1               CENTERING                  /12
              OF COPY CAN BE ACCOMPLISHED
                      BY STRIKING
                   INSERT BLANK SPACE
                PRIOR TO AND IMMEDIATELY
                 AFTER THE LINE OF TEXT
```

Procedure:

STEP 1

Change the type style to the Roman face (Style 1).

STEP 2

Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 3

Change the measure to 0706 units (21 picas).

STEP 4

Change the line space to 120 (12 points).

STEP 5

Press the Start key locking in the newly selected functions.

STEP 6

Press the Shift Lock to be sure that the type is set in all caps (capital letters).

STEP 7

Strike the **Insert Blank Space key.**

STEP 8

Set the first line of the text ''Centering''.

STEP 9

Strike the **Insert Blank Space Key and the Return.**

STEP 10

Repeat the procedure for each line.

STEP 11

Prepare to process the finished copy by advancing the paper into the take-up cassette.

STEP 12

Cut off the paper with the paper cutter and remove the cassette for processing.

Typeset Copy:

CENTERING
OF COPY CAN BE ACCOMPLISHED
BY STRIKING
INSERT BLANK SPACE
PRIOR TO AND IMMEDIATELY
AFTER THE LINE OF TEXT

Positioning With Insert Space

As previously described, the Insert Blank Space function positions the type, filling the remainder of the line measure with blank space as the name implies. It can be inserted into a line without limitation for positioning the copy in various arrangements.

Example: Left and Right Margin Composition

```
                    X15
(10)-2 Compugraphic          Compugraphic /12
       ExecuWriter            ExecuWriter
       Phototypesetter  Phototypesetter
```

Procedure:

STEP 1
Change the type style to Italic (Style 2).

STEP 2
Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 3
Change the measure to 0504 units (15 picas).

STEP 4
Change the line space to 120 (12 points).

STEP 5
Press the Start key locking in the newly selected functions.

STEP 6
Set the first word of text ''Compugraphic''.

STEP 7
Strike the **Insert Blank Space key.**

STEP 8
Set the second word of text ''Compugraphic''.

STEP 9

End the line with the **Return key.**

STEP 10

Repeat the procedure for each line of copy.

STEP 11

Do not advance the paper with the Paper Feed. Instead, advance the paper by repeated striking of the Return key. (6 times for 72 points.) Each Return will advance the paper the selected line space value, allowing space for the next block of copy.

Typeset Copy:

Compugraphic
ExecuWriter
Phototypesetter

Compugraphic
ExecuWriter
Phototypesetter

Example: Positioning Flush Left, Center and Flush Right

```
(10)-1             X16

Vega         Chevrolet          Nova  /14

Dart          Chrysler          Colt

Beetle      Volkswagon        Dasher

Pinto             Ford         Capri
```

Procedure:

STEP 1
Change the type style to Roman (Style 1).

STEP 2
Change the line length to 0532 units (16 picas).

STEP 3
Change the line space to 140 (14 points).

STEP 4
Press the Start key locking in the newly selected functions.

STEP 5
Set the first word of text ''Vega''.

STEP 6
Strike the **Insert Blank Space key.**

STEP 7
Set the second word of text ''Chevrolet''.

STEP 8
Strike the **Insert Blank Space key.**

STEP 9
Set the third word of text ''Nova''.

STEP 10
End the line with the **Return.**

STEP 11
Repeat the procedure for each line.

STEP 12

Advance the paper by repeated striking of the Return key. (5 times for 70 points), advancing the paper for the next block of copy.

Typeset Copy:

Vega	Chevrolet	Nova
Dart	Chrysler	Colt
Beetle	Volkswagon	Dasher
Pinto	Ford	Capri

Example: Aligning Columns with Insert Space

```
                    X18

(10)-1  12345   12345   12345   12345        /10½
         2345    2345    2345    2345
          345     345     345     345
           45      45      45      45
            5       5       5       5
```

Procedure:

STEP 1

Change the type style to Roman (Style 1).

STEP 2

Change the line length to 0605 units (18 picas).

STEP 3

Change the line space to 10½ (10½ points). Press Start.

STEP 4

Set the first column of figures.

STEP 5

Strike the **Insert Blank Space key.**

STEP 6

Set the second column of figures.

STEP 7

Strike the **Insert Blank Space key.**

STEP 8

Set the third column of figures.

STEP 9

Strike the **Insert Blank Space key.**

STEP 10

Set the fourth column of figures, ending the line with the **Return key.** (The procedure is repeated for each line).

STEP 11

Set the second row of figures by starting each column with a **Half Space** to allow for the figure one. Repeat this procedure for each column.

STEP 12

Set the third row of figures by starting each column with **two Half Spaces** to allow for the figures 1 and 2. Repeat this procedure for each column.

STEP 13

Set the fourth row of figures by starting each column with **three Half Spaces** to allow for three figures. (Repeat the procedure for each column.)

STEP 14

Set the fifth row of figures by starting each column with **four Half Spaces** to allow for four figures in each column.

STEP 15

Prepare to process the finished copy by advancing the paper and cutting it with the knife.

Typeset Copy:

```
12345     12345     12345     12345
 2345      2345      2345      2345
  345       345       345       345
   45        45        45        45
    5         5         5         5
```

WORKING WITH THE SPACE KEYS

The Space values being related to the type size enables alignment of type in many different arrangements. It should be remembered that the Half Space is equal to the value of a figure and the One-Third Space is equal to the value of the comma and the period.

Example: Paragraph Alignment

```
                         X18

(10)-1   1. Line Spacing, the amount of   10/20
            space between lines, is
            known as leading.

         2. There is no set rule for
            leading; too much leading
            can be as bad as not enough.

         3. Typefaces with long ascenders
            and descenders require more
            leading.

         4. The wider the measure, the
            more leading is required
            between lines for good
            readability.
```

Procedure:

STEP 1

Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 2

Change the line length to 0605 units (18 picas).

STEP 3

Change the line space to 100 (10 points).

STEP 4

Press the Start key locking in the newly selected functions.

STEP 5

Type the figure "1", period, and a Half Space. Set the complete line, ending with the Return.

STEP 6

Indent the second line by the value of two Half Spaces and a One-Third Space. Complete the second portion of the line, ending with the Insert Blank Space and the Return.

STEP 7

Strike an **extra Return,** doubling the space between blocks of copy.

STEP 8

Repeat the procedure for each block of copy.

STEP 9

Advance the paper with the Return to allow space for further copy.

Typeset Copy:

1. Line Spacing, the amount of space between lines, is known as leading.
2. There is no set rule for leading; too much leading can be as bad as not enough.
3. Typefaces with long ascenders and descenders require more leading.
4. The wider the measure, the more leading is required between lines for good readability.

Example: Indenting for a Run-a-round

It is often necessary to allow space for illustrations or photographs when setting type. The space keys provide the space values which are relative to the type size.

X16

5 picas
60 points

The Em (full space) is an important term in typesetting. It is the square of any type size. That is, a 10 point Em with a 10 set value is 10 points wide and 10 points high. The En, (half space) is half the value of the Em. It also is the same value as the figure, dollar mark, cent mark, asterisk and paragraph marks. The Thin Space (one-third space) is used for alignment with the period and comma.

Procedure:

STEP 1

Advance the photographic paper for approximately 5 seconds to clear any exposed area.

STEP 2

Change the line length to 0532 units (16 picas).

STEP 3

Change the line space to 120 (12 points). Strike the Start key locking in the newly selected functions.

STEP 4

Indent six (6) Full Spaces.

STEP 5

Set the first line of text.

STEP 6

Indent the second line by the same amount, repeating the process for five (5) lines.

STEP 7

Complete the paragraph without further indentions.

STEP 8

Advance the paper with the Return allowing space for the next block of copy.

Typeset Copy:

The Em (full space) is an important term in typesetting. It is the square of any type size. That is, a 10 point Em with a 10 set value is 10 points wide and 10 points high. The En, (half space) is half the value of the Em. It is also the same value as the figure, dollar mark, cent mark, asterisk and paragraph marks. The Thin Space (one-third space) is used for alignment with the period and comma.

Example: Right Margin Indent

Although the indent for illustrations on the right margin can be accomplished with the space keys, it is easier to set this type of arrangement by changing the line length thereby automatically indenting each line by the selected line length value.

X16

The Em (full space) is an impor- 5 picas
tant term in typesetting. It is
the square of any type size.
That is, a 10 point Em with a
10 set value is 10 points wide
and 10 points high. The En
(half space) is half the value of the Em.
It also is the same value as the figure,
dollar mark, cent mark, asterisk and
paragraph marks. The Thin Space (one-
third space) is used for alignment
with the period and comma.

Procedure:

STEP 1

Shorten the line length to 0356 units (11 picas).

STEP 2

Set four (4) lines of the paragraph on the 11 pica measure.

STEP 3

Set the fifth line and **before striking the Return*** change the line length back to 0532 units (16 picas).

STEP 4

Complete the setting of the paragraph on the 16 pica measure.

STEP 5

Advance the photographic paper approximately 5 seconds in preparation for processing the material.

* **Note:** If the new measure is not inserted before striking the Return on the fifth line, it can be inserted by selecting the line length after the Return on the fifth line. Striking a Cancel Line function will activate and lock in the new measure.

Typeset Copy:

The Em (full space) is an important term in typesetting. It is the square of any type size. That is, a 10 point Em with a 10 set value is 10 points wide and 10 points high. The En (half space) is half the value of the Em. It is also the same value as the figure, dollar mark, cent mark, asterisk and paragraph marks. The Thin Space (one-third space) is used for alignment with the period and comma.

Example:

X18

(10)-3 COMPUGRAPHIC CORP. /20

CompuWriter Jr. /14
CompuWriter I
CompuWriter II
CompuWriter IV
ExecuWriter

Procedure:

STEP 1

Change to the Bold style (Style 3).

STEP 2

Change the line length to 0605 units (18 picas).

STEP 3

Change the line space to 100 (10 points). Press the Start key locking in the measure and line space.

STEP 4

Center the Bold head "Compugraphic Corp." with the Insert Blank Space function and Return.

STEP 5

Insert additional line space for 20 points between the text and the head by again striking the Return key.

STEP 6

Change the line space to 140 (14 points).

STEP 7

Type the **last line** of the indented copy "ExecuWriter".

STEP 8

Insert Full Spaces, counting each one until the line oversets (16 Full Spaces). **Cancel the line.**

STEP 9

Divide the number of Full Spaces that can be inserted by one less than the number of indented lines (4 lines). This will show the amount of indent for each line (4 Full Spaces).

STEP 10

Set the first line flush to the left margin.

STEP 11

Indent the second line by the value of 4 Full Spaces. Type the second line flush left to the margin.

STEP 12

Indent the third line twice the indent value (8 Full Spaces) and set flush left to the margin.

STEP 13

Indent the fourth line by again adding the indented value (12 Full Spaces) and set the line flush left, Return.

STEP 14

Change the line space to 100 (10 points).

STEP 15

Strike the Insert Blank Space and set the last line of the indented copy **flush right,** Return.

STEP 16

Repeat the line space by striking the Return for the additional 10 points of space between the text and the address.

STEP 17

Set "Wilmington", Insert Blank Space, "Massachusetts", ending the line with the Return.

STEP 18

Advance the paper to prepare for typesetting the next exercise.

Typeset Copy:

COMPUGRAPHIC CORP.

CompuWriter Jr.
CompuWriter I
CompuWriter II
CompuWriter IV
ExecuWriter

Wilmington **Massachusetts**

LETTERSPACING WITHIN A LINE

The 1/18th is a very small space inserted from the Shift position of the Multiple Column key. The space is normally placed between characters for the letterspacing of words. Letterspacing is used to fill a line when loosely justified with word space. This can occur when a word does not fit into a measure and where hyphenation cannot be inserted for an evenly spaced appearance of the line.

Letterspacing is also inserted between characters and words that are capitalized for added legibility.

Example: Letterspacing with the 1/18th Space

```
                 Just. 10½
(10)-3   The lines are exposed through /12
         both the film strip and the
         lens which is mounted on a travelling
         lens carriage.
```

Procedure:

STEP 1
Change to the Bold style.

STEP 2
Change the line length to 0343 units (10½ picas).

STEP 3
Change the line space to 120 (12 points) and press Start.

STEP 4
Set the first line. Note that it will overset on the word "through" which cannot be divided.

STEP 5
Cancel the line.

STEP 6

Reset the line inserting the 1/18th Space between all characters. This is accomplished by striking the key in the **Shift position** after typing each character. The line is ended with the Return.

STEP 7

The third and fourth lines are also loosely. spaced. Repeat the procedure for these lines.

STEP 8

Advance the paper in preparation for processing the completed typeset copy.

Typeset Copy:

The lines are exposed through both the film strip and the lens which is mounted on a travelling carriage.

SETTING TYPE WITH LEADERS

Leaders are generally used in justified composition to guide the eye across the line of text. The Leaders must be manually inserted from the keyboard. They are placed up to the second part of copy on the Leader line. In order to establish a point to allow space for insertion of copy at the end of the Leader line, the audio tone for Justification Range can be used. When the tone is activated, approximately six average characters can be inserted to complete the line.

Example: Justifying Leadered Lines

```
 10)-3        TABLE OF CONTENTS         /18

                   X15           Page   /12


          Spring Semester Calendar...4
          Academic Programs..........5
          Course Load and Credits....6
          Tuition Fees...............7
          Special Programs...........8
          Education..................9
          Industrial Plans..........10
```

Procedure:

STEP 1

Change the type style to Bold (Style 3).

STEP 2

Change the line length to 0504 units (15 picas).

STEP 3

Change the line space to 090 (9 points).

STEP 4

Press the Start key locking in the newly selected functions.

STEP 5

Center the head line "Table of Contents" on the measure with the Insert Blank Space function. Remember the extra Return for 18 points of Line Space.

STEP 6

Change the line space to 120 (12 points).

STEP 7

Set the head "Page" flush right on the margin.

STEP 8

Set "Spring Semester Calendar" followed by Insert Blank Space.

STEP 9

Strike the En Leader **repeatedly** until the Audio Justification tone is activated. Insert 2 or 3 more leaders.

STEP 10

Type in one Half Space, the figure "4", ending the line with the Return.

STEP 11

Repeat the procedure for each line allowing for two figures on the end of each line.

STEP 12

Remember to advance the paper to prepare for processing.

Typeset Copy:

TABLE OF CONTENTS

Page

Spring Semester Calendar 4
Academic Programs 5
Course Load and Credits 6
Tuition Fees 7
Special Programs 8
Education 9
Industrial Plans .10

Example: Justifying Leader Lines with Variable Line Endings

If Leaders must be placed between copy that is to be set margin to margin, there is no way to determine the number of Leaders to be inserted before setting the second portion of the line. It is recommended that this arrangement be set in two blocks. When the blocks are completed, they are joined together to complete the typeset copy.

```
                  X28

(10)-3  Dr. Joseph Smith...........Division of Technology /12½
        Mr. Richard Mentz.........Division of Mathematics
        Dr. Robert Tyler....Physical Education and Health
        Dr. William Soulert.............Division of Arts
        Dr. Alfred Riordan...........Division of Sciences
```

Procedure:

STEP 1

Advance the photographic paper clearing any exposed area.

STEP 2

Change the line length to 1135 units (28 picas).

STEP 3

Change the line space to 12½ (12½ points).

STEP 4

Press Start locking in the new function changes.

STEP 5

Set "Dr. Jospeh Smith".

STEP 6

Insert Leaders until the right margin indicator is lit. Strike the Insert Blank Space and Return.

STEP 7

Repeat the procedure for each line. First the name and then the Leaders. Do not set the copy for the right margin until all the names have been set.

STEP 8

Insert Blank Space. Set Leaders for a small portion of the line.

STEP 9

Set "Division of Technology", ending the line with the Return.

STEP 10

With the completion of the second half, the lines can now be pasted together for a completed block of copy.

Typeset Copy:

Dr. Joseph Smith. . . . .
Mr. Richard Mentz . . . .
Dr. Robert Tyler . . . .
Dr. William Soulert . . . .
Dr. Alfred Riordan . . . .

. . . . **Division of Technology**
. . . . **Division of Mathematics**
. . . . **Physical Education and Health**
. . . . **Division of Arts**
. . . . **Division of Sciences**

Dr. Joseph Smith . . . . **Division of Technology**
Mr. Richard Mentz. . . . . **Division of Mathematics**
Dr. Robert Tyler. . . . . **Physical Education and Health**
Dr. William Soulert. . . . . **Division of Arts**
Dr. Alfred Riordan. . . . . **Division of Sciences**

SETTING TYPE WITH RULES

Rules can be typed into the line, similar to the insertion of Leaders. The rule image, placed on the baseline of the type, is referred to as a Baseline Rule (BLR). The rules are joined together for continuity of lines and the weight of the rule is related to the type size.

Example: Text with Rules

X30

10)-3 Name______________________________ /18

Address____________________________

City________ State_______ Phone______

___________________________________ 10/20
Title

____
Title

____
Signature

Procedure:

STEP 1

Advance the paper for approximately 5 seconds to clear any exposed area. Change the line length to 1210 units (30 picas).

STEP 2

Change the line space to 090 (9 points). Strike the Start.

STEP 3

Type "Name" and strike the Insert Blank Space.

STEP 4

Insert Baseline Rules until the keyboard locks. Cancel out the last Baseline Rules with the Cancel Character key, ending the line with two Returns to double the 9 points of line space to 18 points, as indicated in the markup.

STEP 5

Set the "Address" line using the same procedure. Remember to repeat the line space by striking the Return twice.

STEP 6

Type "City/State/Phone". Insert Baseline Rules, counting the number of rules until the keyboard locks. (29 rules). **Cancel the line.**

STEP 7

Divide the number of rules, placing 11 after "City" and 9 after the words "State" and "Phone".

STEP 8

Type "City", Insert Blank Space and 11 Baseline Rules.

STEP 9

Type "State", Insert Blank Space and 9 Baseline Rules.

STEP 10

Type "Phone", Insert Blank Space and 9 Baseline Rules, ending the line with the Return, Return (18 points line space).

STEP 11

Change the Line Space to 100 (10 points). Insert Blank Space, followed by Baseline Rules until overset. Cancel the last rule with the Cancel Character function. Insert Blank Space and end the line with the Return.

STEP 12

Insert Blank Space. Type "Title", Insert Blank Space and Return, Return.

STEP 13

Repeat the procedure for each line. Remember to advance the paper before processing.

Typeset Copy:

Name ____

Address ____

City_________________**State**_______________**Phone**______________

____

Title

____

Title

____

Signature

SETTING TYPE IN MULTIPLE COLUMNS

Typeset copy can be arranged in tabular form (columns) by pressing the Multiple Column key prior to striking the Return. After the machine completes typesetting the line, the **Multiple Column function, like a typewriter tab, positions the carriage to the right margin of the line measure and prevents activation of line space.** The right margin will be the starting position for the next column with a line length as previously set on the console. The last column must be ended with the Return to advance the line space for the next vertical line of copy, and to move the carriage back to the left margin. Columns can be inserted as many times as needed to the maximum width of seven and one-half inches (45 picas).

Example: Flush Left Multiple Columns

```
                               X12

(10)-3  1 Administration Building   6 Student Center   /14
        2 Art Center                7 Placement Center
        3 Memorial Hall             8 Parking Garage
        4 Infirmary                 9 Testing Lab
        5 East Hall                10 Library
```

Procedure:

STEP 1

Clear any exposed area by advancing the paper for approximately 5 seconds.

STEP 2

Change the line length to 0403 units (12 picas).

STEP 3

Change the line space to 140 (14 points).

STEP 4

Strike the Start key locking in the functions.

STEP 5

Type the figure "1" followed by a One Half Space. Set "Administration Building".

STEP 6

Strike Insert Blank Space, the Multiple Column key * , followed by Return.

STEP 7

Type One Half Space, the figure "6", and One Half Space. Set "Student Center", Insert Blank Space and Return.

STEP 8

Repeat the procedure for each line. Remember that the last column must be ended with only the Return to activate line space to the next line and to move the carriage to the left margin.

STEP 9

Repeat the line space several times to advance the paper for setting the next block of copy.

* **Important:** The Multiple Column function is in the Unshift position. When the function is activated the keyboard must be in the **Unshift condition.**

Typeset Copy:

1 Administration
2 Art Center
3 Memorial Hall
4 Infirmary
5 East Hall
6 Student Center
7 Placement Center
8 Parking Garage
9 Testing Lab
10 Library

Example: Three Multiple Columns Centered on the Measure

Typeset copy can also be centered in multiple column line measures. It is centered with the Insert Blank Space, ending each column with the Multiple Column function and the Return. The last column must be ended with only the Return to achieve line space for the next line. To avoid changing line space values, the line space for the example is obtained by multiple Returns.

X33

(10)-3 THE FINEST OF CUSTOMER SERVICE /6

/18

	X11	X11	X11	
(10)-3	BOOKS	CARDS & GIFTS	CLOTHING	/12
	Hathaway House	Hallmark	Special	
	Bridge Road	Route 100 North	Tremont & Dale	
	Pelham, N.H.	Salem, N.H.	Hudson, N.H.	

Procedure:

STEP 1

Change the line length to 1311 units (33 picas).

STEP 2

Change the line space to 060 (6 points), strike Start.

STEP 3

Center the first cap line on the measure.

STEP 4

Insert Blank Space, set Baseline Rules until overset. Cancel the last rule with the Cancel Character function. Insert Blank Space, Return.

STEP 5

Repeat two extra Returns for additional space (18 points) after the rule.

STEP 6

Change the line measure to 0356 units (11 picas). Strike Start, activating the new measure.

STEP 7

Insert Blank Space, set "Books", Insert Blank Space, strike the Multiple Column* function and Return.

STEP 8

Insert Blank Space, set "Cards & Gifts", Insert Blank Space, strike the Multiple Column* function and Return.

STEP 9

Insert Blank Space, set "Clothing", Insert Blank Space and Return, Return.

STEP 10

Set "Hathaway House", "Hallmark" and "Special", using the same procedure for centering each line of copy. Remember to repeat the Return function after each line for a total of 12 points of line space as indicated on the markup.

* **Note:** The Multiple Column function must be inserted from the Unshift position.

Typeset Copy:

THE FINEST OF CUSTOMER SERVICE

BOOKS	**CARDS & GIFTS**	**CLOTHING**
Hathaway House	**Hallmark**	**Special**
Bridge Road	**Route 100 North**	**Tremont & Dale**
Pelham, N.H.	**Salem, N.H.**	**Hudson, N.H.**

Example: Multiple Columns Positioned on the Right Margin

Multiple Columns can also be arranged on the right margin of the line measure. The Insert Blank Space is used to position the copy, ending each column with the Multiple Column function followed by the Return. The last Multiple Column is ended with only the Return to activate line spacing to the next line and to return the carriage to the left margin.

```
                         X 6

(10)-1 $50,000.00   $89,500.50   $125,000.00   /12
         5,000.00     8,000.00     45,500.00
           300.00        50.00           .98
            50.00         5.00         10.00
        25,000.00       100.00        600.00
```

Procedure:

STEP 1

Change to the Roman type (Style 1).

STEP 2

Advance the paper for approximately 5 seconds to clear any exposed area.

STEP 3

Change the line length to 0202 units (6 picas).

STEP 4

Change the line space to 120 (12 points) and strike Start.

STEP 5

Insert Blank Space, set ''$50,000.00''. Strike the Multiple Column function followed by the Return.

STEP 6

Insert Blank Space, set ''$89,500.00''. Strike the Multiple Column function followed by the Return.

STEP 7

Insert Blank Space, set ''$125,000.00'' and Return.

STEP 8

Repeat the procedure for each line. Remember that the last column is ended with only a Return.

STEP 9

Advance the film in preparation for processing.

Typeset Copy:

$50,000.00	$89,500.50	$125,000.00
5,000.00	8,000.00	45,500.00
300.00	50.00	.98
50.00	5.00	10.00
25,000.00	100.00	600.00

Example: Multiple Columns with Variable Line Lengths

When arranging type with the Multiple Column function, line lengths can be changed for obtaining different column widths. The line length change must be made **immediately prior** to activation of the Return. Activation of the Return will set the type on the previously selected measure reverting to the new line length value. The procedure would be to set the copy for the column measure, change to the new measure, strike the Multiple Column function and the Return.

(10)-1 YEARLY COMPARISON /24

		X21	X7	X7	X7	
(10)-1			1973	1972	1971	6/18
		At year end				
	$\boxed{1}$	Assets	$193,869,945	$166,842,993	$150,890,000	/12
		Deposits	170,469,811	148,281,173	125,500,000	
		Loans	115,276,547	94,433,169	75,000,000	
		Capital	15,940,483	11,121,546	10,980,180	/24
		For the year				
	$\boxed{1}$	Operating Income	1,425,094	1,264,020	1,000,000	/12
		Net Income	1,455,538	1,352,586	990,800	

Procedure:

STEP 1

Advance the paper to clear any exposed area. Refer to the Line Length Chart for the unit value of the column measure (21 picas, 7 picas).

STEP 2

Change the line length to 21 picas, the line space to 12 points and press Start.

STEP 3

Set "YEARLY COMPARISON", flush to the left margin with Insert Blank Space. Return, Return for 24 points of line space.

STEP 4

Change the line space to 6 points.

STEP 5

Insert Blank Space, change the line length to 7 picas. Strike the Multiple Column function and the Return. This will position the carriage for the starting position of the second column, changing the new measure to 7 picas.

STEP 6

Insert Blank Space, set ''1973'', Insert Blank Space. Strike the Multiple Column function and the Return. This will center ''1973'' and move the carriage for the next column.

STEP 7

Insert Blank Space, set ''1972'', Insert Blank Space. Strike the Multiple Column function and Return.

STEP 8

Change the line length to 21 picas, Insert Blank Space, set ''1971'', Insert Blank Space, Return.

STEP 9

Insert Blank Space. Change the line length to 7 picas. Strike the Multiple Column function and the Return. This will move the carriage to the second column for the insertion of the rule.

STEP 10

Insert Blank Space, set two Baseline Rules, Insert Blank Space. Strike the Multiple Column function and the Return. The two rules are equal to the value of the four figure spaces. Repeat this procedure for the next column.

STEP 11

Change the line length to 21 picas and repeat the procedure again, ending with three Returns. The extra Returns will provide the additional line space for 18 points as indicated in the markup.

STEP 12

Change the line space to 12 points. Set ''At Year End'', Insert Blank Space, Return.

STEP 13

Indent one Full Space, set ''Assets'', Insert Blank Space, set Leaders to the full measure. Change the line length to 7 picas, strike the Multiple Column function and Return.

STEP 14

Insert Blank Space, set $193,869,945'', Insert Blank Space.Strike the Multiple Column function and Return. Set ''$166,842,983'', the same way.

STEP 15

Insert Blank Space, set "$150,890,000", Insert Blank Space, Return. Repeat this procedure for each line.

STEP 16

Remember that the Half Space must be inserted for a figure and the One-Third Space for the comma in the columns with lesser values. Insert an extra Return at the end of the first block for line space of 24 points.

Typeset Copy:

YEARLY COMPARISON

	1973	1972	1971
At year end			
Assets	$193,869,945	$166,842,993	$150,890,000
Deposits	170,469,811	148,281,173	125,500,000
Loans	115,276,547	94,433,169	75,000,000
Capital	15,940,483	11,121,546	10,980,180
For the year			
Operating Income	1,425,094	1,264,020	1,000,000
Net Income	1,455,538	1,362,586	990,800

TYPESETTING MEASUREMENTS

TYPESETTING MEASUREMENTS

The Point System

The Point and the Pica are the two standard units of measure used in typesetting and copy arrangement when photocomposing. The Point equals 1/72 of an inch, that is, there are **72 Points to one inch.**

The Pica

The Pica is a larger unit of measurement used in the point system. The **Pica equals 12 points,** or 1/6 of an inch (six picas to one inch).

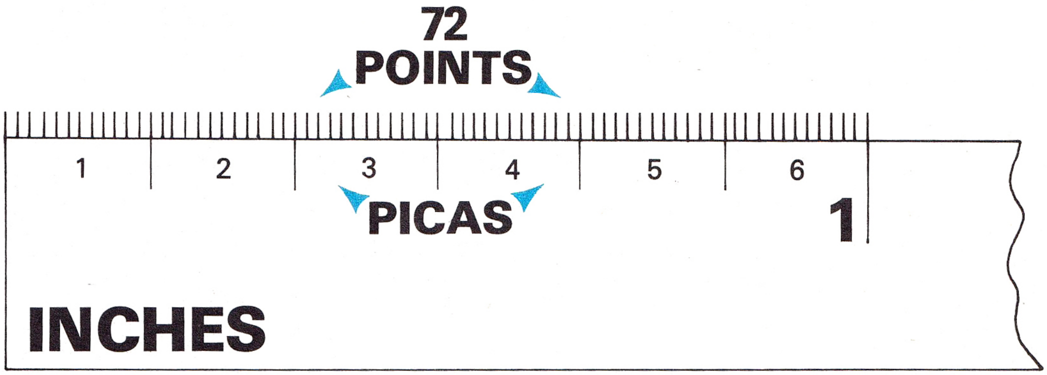
Line lengths for typeset copy are specified in Picas, as well as the depth of copy blocks. For example, a copy block three inches wide by five inches deep, would be designated 18 picas wide, 30 picas deep.

Type Size measurements are referred to as Point Size. The Point Sizes on the photocomposer are as follows:

Size No. 6 - 6 Point
Size No. 7 - 7 Point
Size No. 8 - 8 Point
Size No. 9 - 9 Point
Size No. 10 - 10 Point
Size No. 11 - 11 Point
Size No. 12 - 12 Point

Line Space

Line Space (Leading), is also specified in Points. When the Line Space equals the Point Size, it would be considered set solid and designated in points equaling the type size. For example, Line Space for 10 point type would be designated as 10 on 10 (10 point type, 10 points of Line Space). If the 10 point type was to be set with two (2) extra points of space between lines, the extra space should be specified as 10 on 12 (10 point type, 12 points of Line Space).



18 PICAS

30 PICAS DEEP
5 INCHES

10 POINT TYPE
12 POINTS OF LEAD

Copy Preparation for Type Composition

Good copy preparation and accurate markup insures correct composition of text matter with a minimum of alterations, in the shortest possible time, and thus at the lowest possible cost.

Careful checking and editing of text before it is set is a must! Remember, the typesetter must set copy as it is presented, even if he suspects errors. Therefore, it is of the utmost importance that spelling, punctuation, capitalization, uniformity of style, etc., be carefully reviewed.

The ground rules for good copy preparation, though established long ago, still apply today:

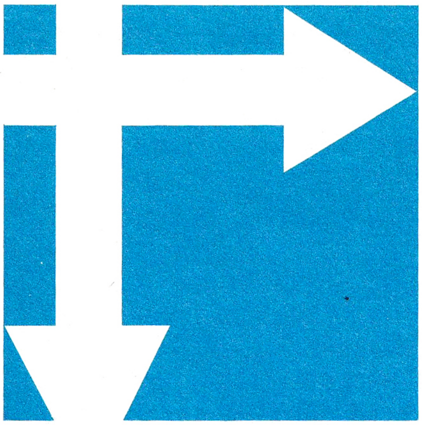
The paper should be standard 8½ x 11 white bond. This allows for erasures and fits standard file cabinets.

Typing should be clean, double-spaced, with wide margins, and on one side of the sheet only.

Corrections should be typed above the line wherever possible, or made neatly in ink - not pencil. If there are many corrections, the page should be retyped. Corrections should not be made in the left margin, on the back of the sheet, or on attached slips which may be easily misplaced or lost.

Identification should be made at the top of each sheet to prevent possible mixup - title, running head or any other helpful information.

Numbering sheets is recommended. If there is more than one sheet, mark "more" at the bottom, and "end" on the last sheet. If a sheet is ad-



COPY FITTING

COPY FITTING

Copy Fitting is the estimation of the number of typeset lines that will fit into a given area of space in a specific style and type size.

Why Copy Fitting?

Although Copy Fitting is not always necessary, it must be done when trying to determine a style and type size to be set into a specific area.

Character Count

Counting the number of characters in the copy is the most accutate method of copy fitting. Because of the variables — short lines, number of Caps, indents etc., it is an approximate number.

There are several methods used to determine how many characters are in a piece of copy. Most typewriter copy has ten (10) characters per inch. What must be determined is the number of characters in the average line. This can be found by drawing a vertical line along the right margin of the typewritten manuscript copy at the width of the average line. Then count the number of characters, including spaces, and multiply the average number of characters by the number of typewriter lines.

Another method would be to count the number of characters in several lines and average them out, multiplying this average by the number of lines.

Converting Typewriter Copy To Type

To find the number of lines in a given type style and size, it is necessary to determine the number of characters that will fit into a pica. An **alphabet length for each set size** is shown on page 108. The alpha length represents the lower case horizontal character width for a **specific style and type size.**

Having determined the alpha length in the selected style and size, refer to the Copy Fitting Chart on pages 110-112 to find the characters per pica. Multiplying the characters per pica by the selected pica line length, will give the average characters per line. Dividing the **total number of manuscript characters** by the number of characters per line for the type style, will determine the number of lines.

Example: Converting typewriter manuscript copy to 10 point Bodoni, 21 pica measure.

Drawing a line through the average width of the type-
writer copy will determine the average number of char-
acters in a line. Counting the characters in the
average line will determine the approximate number of
characters in the manuscript copy. Short lines can be
counted as full lines, since the typeset copy will
also have short lines. If there are several pages of
text, it may be necessary to find the average number of
lines per page. This is accomplished by adding the
total number of lines and dividing by the number of
pages. If type style and size are determined in advance,
the manuscript copy can be typed with the proper
number of characters to the line so that the type
setting will run approximately line for line.

The above typewriter copy contains 14 lines averaging 51 characters to the line.

ALPHA LENGTH CHART

(Based on Set Sizes for The ExecuWriter)

Set Size	Lower Case Alphabet Length	Set Size	Lower Case Alphabet Length
6.0	76.3	10.0	127.2
6.5	82.6	10.5	133.6
7.0	89.0	11.0	140.0
7.5	95.4	11.5	146.3
8.0	101.8	12.0	152.6
8.5	101.8	12.5	158.9
9.0	114.5	13.0	165.2
* 9.5	120.8		

* Set value as shown on the film strip.

STEP 1

Count the number of typewriter lines.

14 LINES

STEP 2

Find the average number of characters for each line of typewriter copy.

51 CHARACTERS

STEP 3

Multiply the average number of characters per line by the number of lines. This will be the total number of characters for the typewritten copy.

$$\begin{array}{r} 51 \\ \times\ 14 \\ \hline 714 \end{array}$$

STEP 4

Refer to the typeface alphabet length in the selected style and set size (10 point, 9.5 set). See page 108. The value, 120.8, is rounded off to the highest decimal value (Decimal value 121 Alpha Length).

121 ALPHA LENGTH
DECIMAL VALUE

STEP 5

Refer to Copy Fitting Chart (Pages 110-112) for characters per pica in the determined alpha length above. Round off to the nearest decimal value.

2.8 CHARACTERS
PER PICA

STEP 6

Multiply the characters per pica by the pica measure (21 picas). This will be the number of characters in a line of 10 point with a 9.5 set value. Round off the decimal remainder to the next highest value.

$$\begin{array}{r} 21 \\ \times\ 2.8 \\ \hline 58.8 \text{ or } 59 \end{array}$$

STEP 7

Divide the total number of typewriter characters by the number of characters in a line of the selected style and size. This will be the total number of 10 point Bodoni lines for the 21 pica measure for the typewriter copy.

$$\begin{array}{r} 12 \\ 59\overline{)714} \end{array}$$

COPY FITTING CHART

(Based on Alphabet Length in Points)

Alphabet Length in Points	Char. per Pica	Alphabet Length in Points	Char. per Pica	Alphabet Length in Points	Char. per Pica	Alphabet Length in Points	Char. per Pica
60 Pts.	5.70	102 Pts.	3.35	144 Pts.	2.38	186 Pts.	1.84
61 Pts.	5.61	103 Pts.	2.32	145 Pts.	2.36	187 Pts.	1.83
62 Pts.	5.52	104 Pts.	3.29	146 Pts.	2.34	188 Pts.	1.82
63 Pts.	5.43	105 Pts.	3.26	147 Pts.	2.33	189 Pts.	1.81
64 Pts.	5.34	106 Pts.	3.23	148 Pts.	2.31	190 Pts.	1.80
65 Pts.	5.26	107 Pts.	3.20	149 Pts.	2.30	191 Pts.	1.79
66 Pts.	5.18	108 Pts.	3.17	150 Pts.	2.28	192 Pts.	1.78
67 Pts.	5.10	109 Pts.	3.14	151 Pts.	2.26	193 Pts.	1.77
68 Pts.	5.03	110 Pts.	3.11	152 Pts.	2.25	194 Pts.	1.76
69 Pts.	4.96	111 Pts.	3.08	153 Pts.	2.24	195 Pts.	1.75
70 Pts.	4.89	112 Pts.	3.05	154 Pts.	2.22	196 Pts.	1.74
71 Pts.	4.82	113 Pts.	3.03	155 Pts.	2.21	197 Pts.	1.74
72 Pts.	4.75	114 Pts.	3.00	156 Pts.	2.19	198 Pts.	1.73
73 Pts.	4.68	115 Pts.	2.97	157 Pts.	2.18	199 Pts.	1.72
74 Pts.	4.62	116 Pts.	2.95	158 Pts.	2.16	200 Pts.	1.71
75 Pts.	4.56	117 Pts.	2.92	159 Pts.	2.15	202 Pts.	1.70
76 Pts.	4.50	118 Pts.	2.90	160 Pts.	2.14	204 Pts.	1.68
77 Pts.	4.44	119 Pts.	2.87	161 Pts.	2.12	206 Pts.	1.66
78 Pts.	4.38	120 Pts.	2.85	162 Pts.	2.11	208 Pts.	1.64
79 Pts.	4.33	121 Pts.	2.83	163 Pts.	2.10	210 Pts.	1.63
80 Pts.	4.28	122 Pts.	2.80	164 Pts.	2.09	212 Pts.	1.61
81 Pts.	4.22	123 Pts.	2.78	165 Pts.	2.07	214 Pts.	1.60
82 Pts.	4.17	124 Pts.	2.76	166 Pts.	2.06	216 Pts.	1.58
83 Pts.	4.12	125 Pts.	2.74	167 Pts.	2.05	218 Pts.	1.57
84 Pts.	4.07	126 Pts.	2.71	168 Pts.	2.04	220 Pts.	1.55
85 Pts.	4.02	127 Pts.	2.69	169 Pts.	2.02	222 Pts.	1.54
86 Pts.	3.98	128 Pts.	2.67	170 Pts.	2.01	224 Pts.	1.53
87 Pts.	3.93	129 Pts.	2.65	171 Pts.	2.00	226 Pts.	1.51
88 Pts.	3.89	130 Pts.	2.63	172 Pts.	1.99	228 Pts.	1.50
89 Pts.	3.84	131 Pts.	2.61	173 Pts.	1.98	230 Pts.	1.49
90 Pts.	3.80	132 Pts.	2.59	174 Pts.	1.97	232 Pts.	1.47
91 Pts.	3.76	133 Pts.	2.57	175 Pts.	1.95	234 Pts.	1.46
92 Pts.	3.72	134 Pts.	2.55	176 Pts.	1.94	236 Pts.	1.45
93 Pts.	3.68	135 Pts.	2.53	177 Pts.	1.93	238 Pts.	1.44
94 Pts.	3.64	136 Pts.	2.51	178 Pts.	1.92	240 Pts.	1.43
95 Pts.	3.60	137 Pts.	2.50	179 Pts.	1.91	242 Pts.	1.41
96 Pts.	3.56	138 Pts.	2.48	180 Pts.	1.90	244 Pts.	1.40
97 Pts.	3.53	139 Pts.	2.46	181 Pts.	1.89	246 Pts.	1.39
98 Pts.	3.49	140 Pts.	2.44	182 Pts.	1.88	248 Pts.	1.38
99 Pts.	3.45	141 Pts.	2.43	183 Pts.	1.87	250 Pts.	1.37
100 Pts.	3.42	142 Pts.	2.41	184 Pts.	1.86	252 Pts.	1.36
101 Pts.	3.39	143 Pts.	2.39	185 Pts.	1.85	256 Pts.	1.34

Alphabet Length in Points	Char. per Pica	Alphabet Length Points	Char. per Pica	Alphabet Length in Points	Char. per Pica	Alphabet Length in Points	Char. per Pica
260 Pts.	1.32	428 Pts.	.80	644 Pts.	.53	896 Pts.	.38
264 Pts.	1.30	432 Pts.	.79	650 Pts.	.53	902 Pts.	.38
268 Pts.	1.28	436 Pts.	.78	656 Pts.	.52	908 Pts.	.38
272 Pts.	1.26	440 Pts.	.78	662 Pts.	.52	914 Pts.	.37
276 Pts.	1.24	444 Pts.	.77	668 Pts.	.51	920 Pts.	.37
280 Pts.	1.22	448 Pts.	.76	674 Pts.	.51	926 Pts.	.37
284 Pts.	1.20	452 Pts.	.76	680 Pts.	.50	932 Pts.	.37
288 Pts.	1.19	456 Pts.	.75	686 Pts.	.50	938 Pts.	.36
292 Pts.	1.17	460 Pts.	.74	692 Pts.	49	944 Pts.	.36
296 Pts.	1.16	464 Pts.	.74	698 Pts.	.49	950 Pts.	.36
300 Pts.	1.14	468 Pts.	.73	704 Pts.	.49	956 Pts.	.36
304 Pts.	1.13	472 Pts.	.72	710 Pts.	.48	962 Pts.	.36
308 Pts.	1.11	476 Pts.	.72	716 Pts.	.48	968 Pts.	.35
312 Pts.	1.10	480 Pts.	.71	722 Pts.	.47	974 Pts.	.35
316 Pts.	1.08	484 Pts.	.71	728 Pts.	.47	980 Pts.	.35
320 Pts.	1.07	488 Pts.	.70	734 Pts.	.47	986 Pts.	.35
324 Pts.	1.06	492 Pts.	.70	740 Pts.	.46	992 Pts.	.35
328 Pts.	1.04	496 Pts.	.69	746 Pts.	.46	998 Pts.	.34
332 Pts.	1.03	500 Pts.	.68	752 Pts.	.46	1004 Pts.	.34
336 Pts.	1.02	506 Pts.	.68	758 Pts.	.45	1016 Pts.	.34
340 Pts.	1.01	512 Pts.	.67	764 Pts.	.45	1028 Pts.	.33
344 Pts.	.99	518 Pts.	.66	770 Pts.	.44	1040 Pts.	.33
348 Pts.	.98	524 Pts.	.65	776 Pts.	.44	1052 Pts.	.33
352 Pts.	.97	530 Pts.	.65	782 Pts.	.44	1064 Pts.	.32
356 Pts.	.96	536 Pts.	.64	788 Pts.	.43	1076 Pts.	.32
360 Pts.	.95	542 Pts.	.63	794 Pts.	.43	1088 Pts.	.31
364 Pts.	.94	548 Pts.	.62	800 Pts.	.43	1100 Pts.	.31
368 Pts.	.93	554 Pts.	.62	806 Pts.	.42	1112 Pts.	.31
372 Pts.	.92	560 Pts.	.61	812 Pts.	.42	1124 Pts.	.30
376 Pts.	.91	566 Pts.	.60	818 Pts.	.42	1136 Pts.	.30
380 Pts.	.90	572 Pts.	.60	824 Pts.	.42	1148 Pts.	.30
384 Pts.	.89	578 Pts.	.59	830 Pts.	.41	1160 Pts.	.30
388 Pts.	.88	584 Pts.	.59	836 Pts.	.41	1172 Pts.	.29
392 Pts.	.87	590 Pts.	.58	842 Pts.	.41	1184 Pts.	.29
396 Pts.	.86	596 Pts.	.57	848 Pts.	.40	1196 Pts.	.29
400 Pts.	.86	602 Pts.	.57	854 Pts.	.40	1208 Pts.	.28
404 Pts.	.85	608 Pts.	.56	860 Pts.	.40	1220 Pts.	.28
408 Pts.	.84	614 Pts.	.56	866 Pts.	.39	1232 Pts.	.28
412 Pts.	.83	620 Pts.	.55	872 Pts.	.39	1244 Pts.	.28
416 Pts.	.82	626 Pts.	.55	878 Pts.	.39	1256 Pts.	.27
420 Pts.	.81	632 Pts.	.54	884 Pts.	.39	1268 Pts.	.27
424 Pts.	.81	638 Pts.	.54	890 Pts.	.38	1280 Pts.	.27

LINE SPACE CALCULATION

Line Space is the advancement of the photographic paper providing space for lines. The type size is the determining factor when selecting Line Space. Line Space is referred to as Body Size. The depth of the typeset manuscript copy is determined by the amount of Line Space.

Line Space Depth

After determining the number of lines that the manuscript copy will attain in a style and type size, it is often necessary to space out the lines to fill an area. Mulitplying the number of lines by the type size will determine the actual **depth of the type** but does not include additional line space.

Filling to Specific Depth

To define the amount of Line Space to fill an area, simply subtract the type size from the total depth and divide by one less than the number of lines. The total would be the Line Space value of 11 lines, plus the body size of the last line.

Example: Filling a Depth of 13 Picas

Having established that there are 12 lines of 10 point (9.5 set) type to the manuscript copy, it must now be set with Line Space to fill an area of 13 picas.

12 LINES
10 POINT TYPE

STEP 1

Convert the pica depth to points by multiplying by 12 (Remember, there are 12 points to pica). This will define the depth of area in points.

$$\begin{array}{rl} & \text{13 PICAS} \\ \text{X} & \text{12 POINTS PER PICA} \\ \hline & \text{156 TOTAL DEPTH} \end{array}$$

STEP 2

Multiply the number of lines by the type size. This is the actual area in depth of the type.

$$\begin{array}{rl} & \text{12 LINES} \\ \text{X} & \text{10 POINT} \\ \hline & \text{120 TYPE DEPTH} \end{array}$$

STEP 3

Subtract the type size form the total depth in points.

$$\begin{array}{r} 156 \\ -\ 10 \\ \hline 146 \end{array}$$

STEP 4

Divide the total by one less than the number of lines for the Line Space value.

$$\begin{array}{r} 13 \\ 11\overline{)146} \end{array} \quad \text{LINE SPACE}$$

STEP 5

Prove the Line Space value by multiplying the Line Space by the number of lines.

$$\begin{array}{r} 13 \\ \text{X}\ \ 12 \\ \hline 156 \end{array}$$

GLOSSARY

DID YOU KNOW THAT...

ALPHANUMERIC

A contraction of alphabetic-numeric; the characters which include letters of the alphabet, numerals, and other symbols such as punctuation or mathematical symbols.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:;()'',.

AMPERSAND

(&) The name of the symbol used for ''and''.

&

Tom, Dick & Harry

ASCENDER

The vertical stem that extends above the height of the lower case letters, e.g. ''b, d, etc.''

ASCENDER
a BASELINE dfhtkl

ASTERISK

(*) The figure of a star used to refer to a footnote, etc.

*

*See footnote.

AUTHOR'S ALTERATIONS

(AA's) Corrections or changes that are revisions to the original copy, made by the author on type proofs.

Body type of five and one-half points. Newspaper advertisements are generally measured in agate lines. There are ~~thirteen~~ fourteen lines to the inch.

BAD BREAK

An incorrect word division; an improper hyphenation, i.e., not between syllables. Also, the setting of a hyphenated word at the beginning of the first line on a page.

The size of the type from the bottom of the desc X
enders to the top of the ascenders. The dimension of
type from the top to the bottom, measured from the
top of the highest ascender to the bottom of the
lowest descender.

BASELINE

An imaginary line on which the bottom serif of capital letters and the bottom of the lower case letters such as ''e, i, etc.'' appear to rest.

BASELINE eisacnm

BLOCK LETTER

Gothic or San Serif type.

N B M

BODY TYPE

Type size of 14 points or less used for the text of a printed piece, as distinguished from headings or display lettering.

6 Point Body Type
8 Point Body Type
10 Point Body Type
12 Point Body Type

BOLD FACE

Type that prints in heavy impression. Also referred to as "Black Face".

BOLD FACE
Black Face

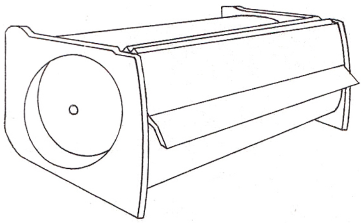
CAPS

Capitals; upper case letters.

CAPITAL
UPPER CASE

CASSETTE

Unit in which the exposed photographic paper output is stored.



CENTERED

Text placed in the center of a line.

LEFT MARGIN RIGHT MARGIN

CENTERED

CHARACTER

A written or printed alphabetic, numeric, or other symbol.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
—·=≠∓<⩽≪≮: :×||≈≅±>⩾≫≯:

COLD TYPE

Composition which is produced by direct impression or strike-on methods.

Typewriter - "cold type"

COLUMN RULE

A fine vertical rule between columns of type.

DANVERS	**DERRY, N.H.**
12 Main Street	Old South Road
774-8956	887-0945

COMPOSITION

Manuscript copy set in type.

This is an example of text matter set in type. This is known as composition. The type face is known as Roman or Light face.

CONDENSED

A type face in which the height is proportionally greater to its width.

Condensed

COPY

Any matter (manuscript, photographs or art work) which is to be printed.

Copy is any matter (manuscript, photographs or art work) which is to be typeset and printed.

DAGGER/DOUBLE DAGGER

(†, ‡) Symbols used for reference marks.

† ‡

DASHES

Straight lines in Em and En widths; not to be confused with hyphens that are used for dividing words.

October 12 — 15
9:00 — 12:00

DESCENDER

That part of the letter that extends below the baseline of the other letters, as in "j, p, q, etc".

BASELINE ______ **j p q y**
DESCENDER

DISPLAY MATTER

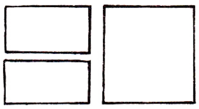
Printed matter in which relatively large type sizes are used. To be distinguished from body or text matter. Most newspaper advertisements are classified as display matter. Type 14 point and larger are generally regarded as display type.

18 point
24 point
30 point

DUMMY

A scaled page layout; a preliminary drawing, layout or other representation of a reproduction.

The inside margin of a book or magazine where facing pages are joined. The binding edges of two facing pages are considered to be the gutter. Also, refers to the white space between columns of type.



A dummy is a scaled page layout; a preliminary drawing, layout or other representation of a reproduction. The gutters are shown on the dummy between columns and pages.

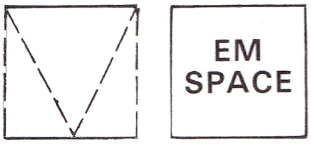
DUPLEXED

Two fonts of type on the same film strip having the same width values.

Roman and *Italic Univers*
Bold and *Bold Italic Univers*

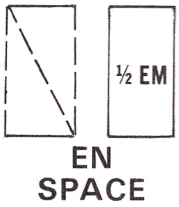
EM SPACE

The square of a body of type of any size; the area occupied by the capital M in a normal non-condensed, non-extended typeface. Referred to as a Full Space on the CompuWriter Executive.



EN SPACE

Figure space (One-half the value of the Em). Referred to as the Half Space on the CompuWriter Executive.



EXPANDED

A type face in which the width is proportionally greater to its height.

Expanded

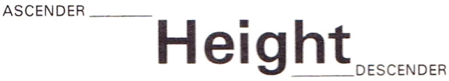
EXTENDED

Expanded. Describes type faces which are broader or wider, in proportion to their height, than usual. Sometimes called "Fat".

Extended

FACE SIZE

The dimension of type from top to bottom, measured from the top of the highest ascender to the bottom of the lowest descender.



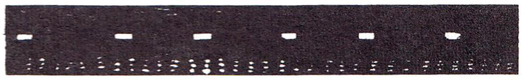
FAMILY

The various sizes and weights of type in the same design pattern.

This is Univers 55 or Univers Light (Roman).
This is Univers 56 or Univers Italic (Light Italic).
This is Univers 65 or Univers Bold.
This is Univers 66 or Univers Bold Italic.

FILM STRIP

In photographic typesetting, the carrier for the master character images.



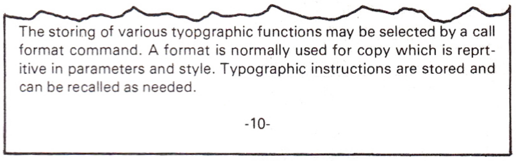
FLUSH

Even with or not indented. Flush left is even with the left margin and flush right even with the right margin. Flush paragraphs have no indention.

This paragraph is set with flush margins. (Flush Left and Flush Right). There are no indentions for the paragraph beginning.

FOLIO

The page number.



The storing of various tyopgraphic functions may be selected by a call format command. A format is normally used for copy which is reprtitive in parameters and style. Typographic instructions are stored and can be recalled as needed.

-10-

FONT

The complete assortment of all characters in a particular style and size of type. Includes all characters, numerics, punctuation marks, and symbols.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890:;(),.″

GUTTER

Refers to the white space between columns of type. Also, the inside margin of a book or magazine where the facing pages are joined.

USED CAR SALE

'71 Volvo	$3095	'71 VW Bug	$1345
'70 MGB GT	$1250	'70 Capri	$2000
'71 MBG GT	$2365	'69 Renault	$1295

GUTTER

HANGING INDENT

Paragraphs in which the first line set is to a full measure with the subsequent lines indented from the left margin.

This is an example of a hanging indent. The first line
  is set to a full measure with every line that follows indented by one pica. This is often used in classified ad composition.

HARD COPY

Visual reference to copy composed with a typewriter keyboard; a typewritten facsimile of the effort of manual keyboarding which may also produce perforated tape simultaneuosly.

`Typewriter - "Hard Copy"`

HEAD

A display line, or heading set in a large size.

DISPLAY HEAD

Taste in printing determines the form typography is to take: the selection of a congruous type; the quality and suitability for its purpose, the paper to be used; and the care and labor taken.

HYPHENLESS JUSTIFICATION

A system of justifying lines by interword and intercharacter spacing without breaking words at line endings.

This is an example of hyphenless justification. There are no hyphens inserted in any words for tighter fitting composition. Hyphenless justification results in larger spaces between words when the photocomposer justifies a line.

INDENTION

Blank space at the beginning of a line. Customary at the beginning of a paragraph.

Taste in printing determines the form typography is to take; the selection foa a congruous type; the quality and suitability for its purpose of the paper to be used; the care and labor, and time, and cost of materials devoted to its production, and all in direct ratio to its ultimate destination and worth.

ITALIC

A slanted or obliqued version of a type face.

Light Italic

Bold Italic

JUSTIFICATION

Spacing a line of type so that it exactly fills the measure. Accomplished by word spacing and letterspacing.

This is an example of Justified Composition. Both margins are Flush. This is accomplished by word spacing, (the space between words in the line) and letterspacing (the space between each character in the line).

KERN

To kern is to reduce the amount of white space between characters to produce a better typographic fit, e.g. the "AW" combination.

AW Normal

AW Kerned Two Points

AW Kerned Three Points

KILL

To strike out from copy or from composed type matter; cancel line or cancel word.

To strike out from the copy or from the composed type matter; discard, ~~throw away~~, don't use, i.e., kill or kill word.

LEADERS

Row of dots or dashes used to guide the eye between items.

Leaders . . . . Leaders

LEADING

The distance between the baseline of one line of type and the baseline of the line which follows it.

Baseline ______**Compugraphic**

Baseline ______**Compugraphic**

LETTERSPACING

An amount of space added between characters to help justify a loose line. This, generally, produces a more pleasing typographic fit.

LEFT MARGIN RIGHT MARGIN

This line has been letterspaced.

LIGATURE

Two or more characters joined on one body such as fi, ff, fl.

ffi ffl fl

LIGHT FACE

Term used to describe typefaces having less impression space on the face than is generally found in bold face. As a rule, used for body or text of printed material.

Light Face or Roman
Light Face Italic

LINE LENGTH

The width of a line of type.

LEFT MARGIN RIGHT MARGIN
|← **Line Measure** →|
15 Picas

LOWER CASE

Uncapitalized letters.

abcdefghijklmnopqrstuvwxyz

MAKE-UP

The arrangement of lines of type and illustrations into pages of proper depth with page numbers, heads, etc.

Bld 14 **Why** /14
leave home /14
10 **for a savings account** /10
that's also a checking account
N.O.W. Accounts are here! /12
Roman 8 You don't have to go far to get more mileage /8
from your savings account. Today, you can
open a N.O.W. Account right here at Medford
Savings. You'll enjoy all the conveniences of a
checking account with a savings account that
earns interest from the day of deposit to the
day of withdrawal. /16
Bld 12 **Medford Savings Bank**

MARK-UP

The preparation of copy to insure correct make-up or arrangement of text and display matter with a minimum of corrections.

MATTER

Type that has been set.

This is phototypeset matter set on Compugraphic Phototypesetting equipment.

MEASURE

The width of a line (Line Length).

LEFT MARGIN RIGHT MARGIN
|— MEASURE —|
|The measure is the width of a type line.|

MECHANICALS

Copy pasted-up (mounted) on layout in final format ready for the camera.

Yes, I'd like more information on how I can become a technician in just 7 short months, trained by Sylvonia Technical School. Please send me your brochure on the following areas:

Radio TV Computers

Name ____________________
Address ____________________

MISPRINT

A typographical error.

A typographic **eror!**

NEGATIVE

A photographic reproduction in reverse, usually on a clear acetate base. Image areas are transparent and non-image areas are opaque in negative form.

NEGATIVE

OUTLINE

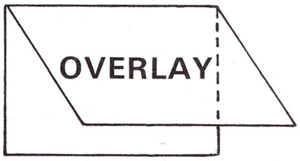
A type face in which the letter does not print solidly, but outlines the shape of the letter with double lines. Also called "Open Face".

OUTLINE

Open Face

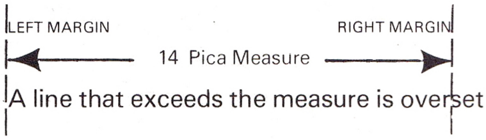
OVERLAY

A transparent covering on copy on which directions or work to be overprinted are placed, in the preparation of art work.



OVERSET

In composition, type set in excess of a given line measure.


LEFT MARGIN
RIGHT MARGIN
14 Pica Measure
A line that exceeds the measure is overset

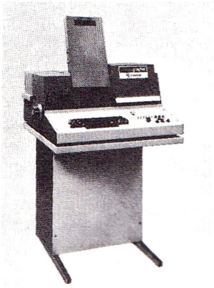
PARAGRAPH MARK

(¶) Indicates a paragraph.

¶

PHOTOTYPESETTER

A machine that is tape driven or keyboard operated and produces images of characters on film or paper through a photographic process of exposing a negative matrix.



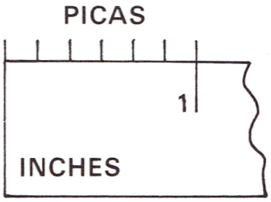
PI CHARACTERS

Miscellaneous characters which are optional and variable in width. E.G. Bullet, Star, Box, etc.

● ★ □

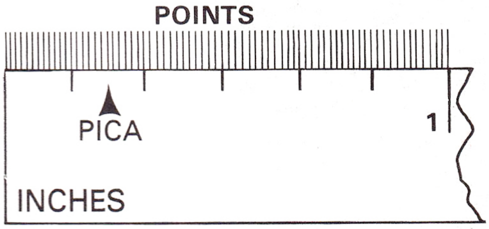
PICA

A unit of measurement, 0.166 inch, (approximately one-sixth of an inch), or exactly 12 points.


PICAS
1
INCHES

POINT

A unit of measurement, 0.0138 inch, approximately 1/72 of an inch. There are 12 points to a pica.



POSITIVE

The reverse of a negative; black copy on a white or clear background.

POSITIVE

The last few weeks of winter are the ideal time to stay in and put together a spring wardrobe. Sewing lets you choose the styles and fabrics that spell YOU and spares your pocketbook too! Now we offer you such great savings on fabrics that you can't afford not to get sewing your new spring outfits.

PROOF

A print of a typeset job read to detect errors.

QUADDING

Inserting blank spaces to fill out a line to a preset measure. To quad right, quad center, or quad left by using blank spaces to fill out the line which is to be set flush right, centered, or flush left.

LEFT MARGIN RIGHT MARGIN

Quad Left

Quad Center

Quad Right

QUOTES

Quotation marks:"Open and closed quotes".

"Open Quotes"

RAGGED LEFT

Composition set with a flush right margin and an unjustified left margin.

Taste in printing determines the form typography is to take; the
selection of a congruous type; and suitability for its
purpose and the paper to be used; the care and labor, and time, and
cost of materials devoted to its production.

RAGGED RIGHT

Composition set with a flush left margin and an unjustified right margin.

Taste in printing determines the form typography is to take; the
selection of a congruous type; the quality and suitability for its
purpose of the paper to be used; the care and labor, and time,
and cost of materials devoted to its production.

REFERENCE

The * (asterisk), † (dagger), ‡ (double dagger) § (section mark), and ¶ (paragraph).

* † ‡

§ ¶

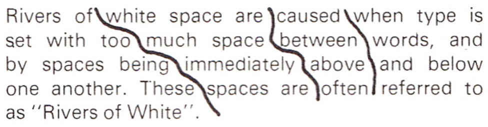
REVERSE

A reverse is copy that has white lettering on a black background; or light lettering, the color of the paper, on a dark background.

REVERSE

RIVERS

Streaks of white space caused when type is set with too much space between words, and by spaces being immediately above and below one another. Often referred to as "Rivers of White".



Rivers of white space are caused when type is set with too much space between words, and by spaces being immediately above and below one another. These spaces are often referred to as "Rivers of White".

RULE

Straight lines scribed on negatives, drawn on copy, or produced photographically.

Name ______________________________
Address ____________________________
City __________ **State** ______________

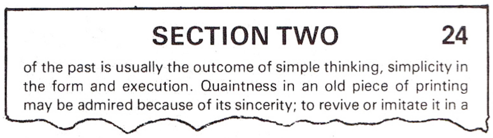
RUN-AROUND

The arrangement of type matter around an illustration or box.

Taste in printing determines the form that typography is to take; the type quality and suitability for its purpose of the paper to be used, the care and labor, and time, and cost of materials to its production, and all in direct ratio to its ultimate destination and worth.

RUNNING HEAD

A title repeated at the top of consecutive pages.



SECTION TWO 24

of the past is usually the outcome of simple thinking, simplicity in the form and execution. Quaintness in an old piece of printing may be admired because of its sincerity; to revive or imitate it in a

SAN SERIF

Type having no serifs.

M

SECTION MARK

(§) Indicates a section.

§

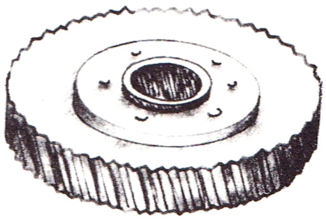
SERIF

A light line or stroke projecting from the end of the main line on the stem of a character.

SERIF

SET GEAR

The gear used in Compugraphic Phototypesetting systems providing proper width for character spacing.



SET SIZE

The horizontal width of a type style.

Set Size
Set Size

SET SOLID

Type matter with no additional leading used between lines.

BASELINE______**Set**
BASELINE______**Solid**

SINGLE QUOTE

Single marks for 'opening' and closing quotes.

'Single Quote'

SOLID MATTER

Type composition set solid, that is not leaded.

BASELINE______**10 Point Type**
BASELINE______**10 Points of Lead**

SPACE BAND

An adjustable space assigned for providing interword spacing.

Space Band
Space Band
Space Band

STRAIGHT MATTER

Body copy paragraph-type composition.

This is an example of straight matter. It is in paragraph form. Straight matter is composition that is found in the pages of a book.

TABULAR MATTER

Listing made up chiefly of columnar figures and words separated by vertical rules, horizontal rules or blank spaces.

100	200	300
400	500	600
700	800	900
455	67	988
12	45	86

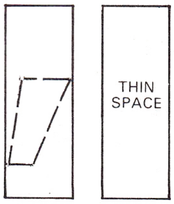
TEXT

Type matter on a page or book as opposed to display matter.

Type matter in a page or book as opposed to display matter. Text material is usually set in the type range of 8 to 12 point type. This example is set in 8 point.

THIN SPACE

Space equal to the width of a period or comma. Referred to as ⅓ space on the CompuWriter Executive.



TYPE FAMILY

The complete series of a particular typeface, including light face, bold face, condensed, italic, etc.

Univers Roman
Univers Italic
Univers Bold
Univers Bold Italic

TYPE STYLES

General Classification

1. ROMAN — The type in common use in all types of reading matter.
2. ITALIC — A slanting letter of any typeface used mostly for quotations or emphasis.
3. SCRIPT — A typeface with joined letters imitative of handwriting.
4. GOTHIC (Block letter) — Type having lines of uniform thickness, without serifs, of plain and rugged appearance.

Roman — ROMAN

Italic — ITALIC

Script — SCRIPT

Gothic — GOTHIC

TRIPLEX

Three fonts on the same film strip, each having the same width values.

Roman, *Italic,* **Bold**

TYPOGRAPHY

The general term for the art of typesetting.

Typography

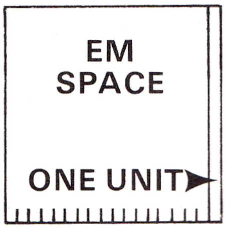
UNDERSCORE

To set a rule under a word or sentence.

COMPUGRAPHIC

UNIT COUNT

A unit system dividing the Em value of a type style and point size into multiples of 1/18th of the Em.



UPPER CASE

Capital letters.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

WHITE SPACE

The part of printed matter not covered by type and illustrations.

Space Bands
Insert Space
Em, En, Thin Space
Gutters between columns

WIDOW

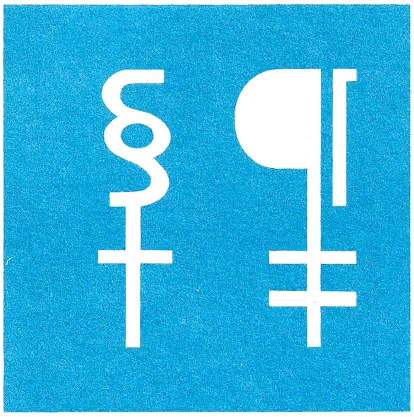
A single word or part of a word in a line by itself. An extremely short last line in a caption. Widows are regarded as poor typography.

At the end of this paragrapph there will be a **widow.** A widow is a single word or part of a word in a line by itself.

TROUBLE SHOOTING

TYPESETTING PROBLEMS

Condition	Probable Cause	Solution
Keyboard locked	Out of Paper	Check paper supply
	Overset line	Strike Start or Cancel function
Paper not feeding	Cassette not seated correctly	Reseat Cassette
	Paper jammed in cassette	Check cassette for jammed paper
	Faceplate loose	Tighten screws on faceplate
	Cutter not placed to margin	Be sure cutter is moved to extreme left or right margins
Bad character spacing	Wrong set pulley	Check set value of pulley
	Loose set pulley	Tighten pulley
Wrong measure on first line	Did not activate line length change with start	Remember to strike Start or Return to lock in function
Wrong style	Cancelled style with Start or Cancel function	If a function is cancelled, it must be reinserted
Wrong line space (type set over type)	Did not have enough line space	Recheck value, remember that line space should equal or be larger than type size
Copy exposed at end of take	Did not advance paper for processing	Paper should be advanced for approximately 5 seconds before processing
Copy exposed at beginning of take	Did not advance paper at beginning of take	Paper should be advanced to clear any exposed area
Wrong characters Bad characters	Film strip not mounted properly	Reseat film strip
Characters not printing clearly	Dirty film strip	Clean film strip with recommended procedures
	Chemicals in processor weak	Change chemicals in processor
No space between words	Cancel word space with Cancel Word	Cancel Word includes word space, it must be reinserted
Loosely spaced line at end of paragraph	Did not insert Blank Space	Paragraphs must be ended with Insert Blank Space and Return
Line space with multiple columns	Did not strike Multiple Column function	Multiple Column function must be inserted before Return.
Multiple Column not working	Shift condition	Insert in Unshift position



KEYBOARD ARRANGEMENT

EXECUWRITER
FILM STRIP ARRANGEMENT

PAPER FEED	EM ● . . .	§ †	! 1	@ 2	# 3	$ 4	% 5	¢ 6	& 7	* 8	(9	) 0	— -	1/8 3/8	5/8 7/8	START
1/18 SPACE MC	⅓ SPACE ½ SPACE	FULL SPACE	Q q	W w	E e	R r	T t	Y y	U u	I i	O o	P p	¼ ½	¾ •	⅓ ⅔	CANCEL LINE
″ ′	★ BLR	SHIFT LOCK	A a	S s	D d	F f	G g	H h	J j	K k	L l	: ;	RETURN	INSERT BLANK SPACE	‘ ’	CANCEL WORD
	© ®	Superior ¢ Superior $	SHIFT	Z z	X x	C c	V v	B b	N n	M m	,	.	? /	SHIFT	CANCEL CHAR	[ ]

SPACE BAR

ABBREVATIONS:

BLR — Baseline Rule
CAN CHAR — Cancel Character
MC — Multiple Column
. . . — En Leader

LINE LENGTH CHART

SET SIZE

PICAS	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13
1.0	0047	0044	0041	0037	0035	0033	0031	0030	0027	0026	0025	0024	0023	0022	0021	0021
1.5	0073	0066	0062	0056	0053	0051	0046	0044	0042	0040	0037	0035	0034	0033	0032	0031
2.0	0117	0110	0102	0076	0072	0066	0063	0060	0055	0053	0051	0047	0046	0044	0043	0041
2.5	0142	0132	0123	0115	0110	0104	0100	0074	0071	0066	0063	0061	0057	0055	0053	0052
3.0	0166	0154	0144	0135	0126	0121	0114	0110	0104	0101	0076	0073	0070	0066	0064	0062
3.5	0211	0176	0164	0154	0145	0137	0131	0124	0120	0114	0110	0105	0102	0077	0074	0072
4.0	0235	0220	0205	0173	0163	0154	0146	0140	0133	0126	0122	0117	0113	0110	0105	0102
4.5	0261	0242	0226	0213	0202	0172	0162	0154	0146	0141	0135	0130	0125	0121	0116	0113
5.0	0304	0264	0246	0232	0220	0207	0177	0170	0162	0154	0147	0142	0136	0132	0126	0123
5.5	0330	0306	0267	0252	0236	0225	0214	0204	0175	0167	0161	0154	0147	0143	0137	0133
6.0	0354	0330	0307	0271	0255	0242	0230	0220	0210	0202	0173	0166	0161	0154	0150	0144
6.5	0377	0352	0330	0311	0273	0260	0245	0234	0224	0214	0206	0200	0172	0165	0160	0154
7.0	0423	0374	0351	0330	0312	0275	0262	0250	0237	0227	0220	0211	0203	0176	0171	0164
7.5	0447	0416	0371	0347	0330	0313	0277	0264	0253	0242	0232	0223	0215	0207	0202	0175
8.0	0472	0440	0412	0367	0346	0330	0313	0300	0266	0255	0245	0235	0226	0220	0212	0205
8.5	0516	0462	0432	0406	0365	0346	0330	0314	0301	0270	0257	0247	0240	0231	0223	0215
9.0	0541	0504	0453	0426	0403	0363	0345	0330	0315	0302	0271	0261	0251	0242	0234	0226
9.5	0565	0526	0474	0445	0422	0401	0361	0344	0330	0315	0303	0273	0262	0253	0244	0236
10.0	0611	0550	0514	0465	0440	0416	0376	0360	0343	0330	0316	0304	0274	0264	0255	0246
10.5	0634	0572	0535	0504	0456	0434	0413	0374	0357	0343	0330	0316	0305	0275	0265	0256
11.0	0660	0614	0556	0523	0475	0451	0430	0410	0372	0356	0342	0330	0317	0306	0276	0267
11.5	0704	0636	0576	0543	0513	0467	0444	0424	0405	0370	0355	0342	0330	0317	0307	0277
12.0	0727	0660	0617	0562	0532	0504	0461	0440	0421	0403	0367	0354	0341	0330	0317	0307
12.5	0753	0702	0637	0602	0550	0522	0476	0454	0434	0416	0401	0365	0353	0341	0330	0320
13.0	0777	0724	0660	0621	0566	0537	0512	0470	0450	0431	0413	0377	0364	0352	0341	0330
13.5	1022	0746	0701	0641	0605	0555	0527	0504	0463	0444	0426	0411	0376	0363	0351	0340
14.0	1046	0770	0721	0660	0623	0572	0544	0520	0476	0456	0440	0423	0407	0374	0362	0351
14.5	1071	1012	0742	0677	0642	0610	0560	0534	0512	0471	0452	0435	0420	0405	0373	0361
15.0	1115	1034	0762	0717	0660	0625	0575	0550	0525	0504	0465	0447	0432	0416	0403	0371
15.5	1141	1056	1003	0736	0676	0643	0612	0564	0540	0517	0477	0460	0443	0427	0414	0402
16.0	1164	1100	1024	0756	0715	0660	0627	0600	0554	0532	0511	0472	0455	0440	0424	0412
16.5	1210	1122	1044	0775	0733	0676	0643	0614	0567	0544	0523	0504	0466	0451	0435	0422
17.0	1234	1144	1065	1015	0752	0713	0660	0630	0603	0557	0536	0516	0477	0462	0446	0432
17.5	1257	1166	1106	1034	0770	0731	0675	0644	0616	0572	0550	0530	0511	0473	0456	0443
18.0	1303	1210	1126	1053	1006	0746	0711	0660	0631	0605	0562	0541	0522	0504	0467	0453
18.5	1327	1232	1147	1073	1025	0764	0726	0674	0645	0620	0575	0553	0533	0515	0500	0463
19.0	1352	1254	1167	1112	1043	1001	0743	0710	0660	0632	0607	0565	0545	0526	0510	0474
19.5	1376	1276	1210	1132	1062	1017	0760	0724	0673	0645	0621	0577	0556	0537	0521	0504
20.0	1421	1320	1231	1151	1100	1034	0774	0740	0707	0660	0633	0611	0570	0550	0532	0514
20.5	1445	1342	1251	1171	1116	1052	1011	0754	0722	0673	0646	0623	0601	0561	0542	0525
21.0	1471	1364	1272	1210	1135	1067	1026	0770	0735	0706	0660	0634	0612	0572	0553	0535
21.5	1514	1406	1312	1227	1153	1105	1042	1004	0751	0720	0672	0646	0624	0603	0564	0545
22.0	1540	1430	1333	1247	1172	1122	1057	1020	0764	0733	0705	0660	0635	0614	0574	0556
22.5	1564	1452	1354	1266	1210	1140	1074	1034	1000	0746	0717	0672	0647	0625	0605	0566
23.0	1607	1474	1374	1306	1226	1155	1110	1050	1013	0761	0731	0704	0660	0636	0615	0576

(Octal)

	SET SIZE															
PICAS	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13
23.5	**1633**	**1516**	**1415**	**1325**	**1245**	**1173**	**1125**	**1064**	**1026**	**0774**	**0743**	**0715**	**0671**	**0647**	**0626**	**0606**
24.0	**1657**	**1540**	**1436**	**1345**	**1263**	**1210**	**1141**	**1100**	**1042**	**1006**	**0756**	**0727**	**0703**	**0660**	**0637**	**0617**
24.5	**1702**	**1562**	**1456**	**1364**	**1302**	**1226**	**1157**	**1114**	**1055**	**1021**	**0770**	**0741**	**0714**	**0671**	**0647**	**0627**
25.0	**1726**	**1604**	**1477**	**1403**	**1320**	**1243**	**1173**	**1130**	**1070**	**1034**	**1002**	**0753**	**0726**	**0702**	**0660**	**0637**
25.5	**1751**	**1626**	**1517**	**1423**	**1336**	**1261**	**1210**	**1144**	**1104**	**1047**	**1015**	**0765**	**0737**	**0713**	**0671**	**0650**
26.0	**1775**	**1650**	**1540**	**1442**	**1355**	**1276**	**1225**	**1160**	**1117**	**1062**	**1027**	**0777**	**0750**	**0724**	**0701**	**0660**
26.5	**2021**	**1672**	**1561**	**1462**	**1373**	**1314**	**1241**	**1174**	**1133**	**1074**	**1041**	**1010**	**0762**	**0735**	**0712**	**0670**
27.0	**2044**	**1714**	**1601**	**1501**	**1412**	**1331**	**1256**	**1210**	**1146**	**1107**	**1053**	**1022**	**0773**	**0746**	**0723**	**0701**
27.5	**2070**	**1736**	**1622**	**1521**	**1430**	**1347**	**1273**	**1224**	**1161**	**1122**	**1066**	**1034**	**1005**	**0757**	**0733**	**0711**
28.0	**2114**	**1760**	**1642**	**1540**	**1446**	**1364**	**1310**	**1240**	**1175**	**1135**	**1100**	**1046**	**1016**	**0770**	**0744**	**0721**
28.5	**2137**	**2002**	**1663**	**1557**	**1465**	**1402**	**1324**	**1254**	**1210**	**1150**	**1112**	**1060**	**1027**	**1001**	**0754**	**0732**
29.0	**2163**	**2024**	**1704**	**1577**	**1503**	**1417**	**1341**	**1270**	**1223**	**1162**	**1125**	**1071**	**1041**	**1012**	**0765**	**0742**
29.5	**2207**	**2046**	**1724**	**1616**	**1522**	**1435**	**1356**	**1304**	**1237**	**1175**	**1137**	**1103**	**1052**	**1023**	**0776**	**0752**
30.0	**2232**	**2070**	**1745**	**1636**	**1540**	**1452**	**1372**	**1320**	**1252**	**1210**	**1151**	**1115**	**1063**	**1034**	**1006**	**0762**
30.5	**2256**	**2112**	**1766**	**1655**	**1556**	**1470**	**1407**	**1334**	**1265**	**1223**	**1163**	**1127**	**1075**	**1045**	**1017**	**0773**
31.0	**2301**	**2134**	**2006**	**1675**	**1575**	**1505**	**1424**	**1350**	**1301**	**1236**	**1176**	**1141**	**1106**	**1056**	**1030**	**1003**
31.5	**2325**	**2156**	**2027**	**1714**	**1613**	**1523**	**1440**	**1364**	**1314**	**1250**	**1210**	**1153**	**1120**	**1067**	**1040**	**1013**
32.0	**2351**	**2200**	**2047**	**1733**	**1632**	**1540**	**1455**	**1400**	**1330**	**1263**	**1222**	**1164**	**1131**	**1100**	**1051**	**1024**
32.5	**2374**	**2222**	**2070**	**1753**	**1650**	**1556**	**1472**	**1414**	**1343**	**1276**	**1235**	**1176**	**1141**	**1111**	**1062**	**1034**
33.0	**2420**	**2244**	**2111**	**1772**	**1666**	**1573**	**1507**	**1430**	**1356**	**1311**	**1247**	**1210**	**1154**	**1122**	**1072**	**1044**
33.5	**2444**	**2266**	**2131**	**2012**	**1705**	**1611**	**1523**	**1444**	**1372**	**1324**	**1261**	**1222**	**1165**	**1133**	**1103**	**1055**
34.0	**2467**	**2310**	**2152**	**2031**	**1723**	**1626**	**1540**	**1460**	**1405**	**1336**	**1273**	**1234**	**1177**	**1144**	**1114**	**1065**
34.5	**2513**	**2332**	**2172**	**2051**	**1742**	**1644**	**1555**	**1474**	**1420**	**1351**	**1306**	**1245**	**1210**	**1155**	**1124**	**1075**
35.0	**2537**	**2354**	**2213**	**2070**	**1760**	**1661**	**1571**	**1510**	**1434**	**1364**	**1320**	**1257**	**1221**	**1166**	**1135**	**1106**
35.5	**2562**	**2376**	**2234**	**2107**	**1776**	**1677**	**1606**	**1524**	**1447**	**1377**	**1332**	**1271**	**1233**	**1177**	**1145**	**1116**
36.0	**2606**	**2420**	**2254**	**2127**	**2015**	**1714**	**1623**	**1540**	**1463**	**1412**	**1345**	**1303**	**1244**	**1210**	**1156**	**1126**
36.5	**2631**	**2442**	**2275**	**2146**	**2033**	**1732**	**1640**	**1554**	**1476**	**1424**	**1357**	**1315**	**1256**	**1221**	**1167**	**1136**
37.0	**2655**	**2464**	**2316**	**2166**	**2052**	**1747**	**1654**	**1570**	**1511**	**1437**	**1371**	**1327**	**1267**	**1232**	**1177**	**1147**
37.5	**2701**	**2506**	**2336**	**2205**	**2070**	**1765**	**1671**	**1604**	**1525**	**1452**	**1403**	**1340**	**1300**	**1243**	**1210**	**1157**
38.0	**2724**	**2530**	**2357**	**2225**	**2106**	**2002**	**1706**	**1620**	**1540**	**1465**	**1416**	**1352**	**1312**	**1254**	**1221**	**1167**
38.5	**2750**	**2552**	**2377**	**2244**	**2125**	**2020**	**1722**	**1634**	**1553**	**1500**	**1430**	**1364**	**1323**	**1265**	**1231**	**1200**
39.0	**2774**	**2574**	**2420**	**2263**	**2143**	**2035**	**1737**	**1650**	**1567**	**1512**	**1442**	**1376**	**1335**	**1276**	**1242**	**1210**
39.5	**3017**	**2616**	**2441**	**2303**	**2162**	**2053**	**1754**	**1664**	**1602**	**1525**	**1455**	**1410**	**1346**	**1307**	**1253**	**1220**
40.0	**3043**	**2640**	**2461**	**2322**	**2200**	**2070**	**1770**	**1700**	**1615**	**1540**	**1467**	**1421**	**1357**	**1320**	**1263**	**1231**
40.5	**3067**	**2662**	**2502**	**2342**	**2216**	**2106**	**2005**	**1714**	**1631**	**1553**	**1501**	**1433**	**1371**	**1331**	**1274**	**1241**
41.0	**3112**	**2704**	**2522**	**2361**	**2235**	**2123**	**2022**	**1730**	**1644**	**1566**	**1513**	**1445**	**1402**	**1342**	**1304**	**1251**
41.5	**3136**	**2726**	**2543**	**2401**	**2253**	**2141**	**2037**	**1744**	**1660**	**1600**	**1526**	**1457**	**1413**	**1353**	**1315**	**1262**
42.0	**3161**	**2750**	**2564**	**2420**	**2272**	**2156**	**2053**	**1760**	**1673**	**1613**	**1540**	**1471**	**1425**	**1364**	**1326**	**1272**
42.5	**3205**	**2772**	**2604**	**2437**	**2310**	**2174**	**2070**	**1774**	**1706**	**1626**	**1552**	**1503**	**1436**	**1375**	**1336**	**1302**
43.0	**3231**	**3014**	**2625**	**2457**	**2326**	**2211**	**2105**	**2010**	**1722**	**1641**	**1565**	**1514**	**1450**	**1406**	**1347**	**1312**
43.5	**3254**	**3036**	**2646**	**2476**	**2345**	**2227**	**2121**	**2024**	**1735**	**1654**	**1577**	**1526**	**1461**	**1417**	**1360**	**1323**
44.0	**3300**	**3060**	**2666**	**2516**	**2363**	**2244**	**2136**	**2040**	**1750**	**1666**	**1611**	**1540**	**1472**	**1430**	**1370**	**1333**
44.5	**3324**	**3102**	**2707**	**2535**	**2402**	**2262**	**2153**	**2054**	**1764**	**1701**	**1623**	**1552**	**1504**	**1441**	**1401**	**1343**
45.0	**3347**	**3124**	**2727**	**2555**	**2420**	**2277**	**2170**	**2070**	**1777**	**1714**	**1636**	**1564**	**1515**	**1452**	**1412**	**1354**

(Octal)

SPECIFICATIONS

Height: 13.625 inches
Width: 23.875 inches
Length: 31.063 inches
Weight: 150 pounds
Electrical: 115VAC 60 Hz

FEATURES

Input: Direct keyboard

Type Size: 6 to 12 point

Line Length: Any line length through 45 picas

Line Space: 15 ½ points maximum

Film Strip Capacity: 110 characters, one style, one size

Justification: Manual

Quadding: Automatic

Insert Space: Automatic

Photo Material: 3, 6 and 8 inch widths

Visual Display: 32 Characters

Multiple Justification Shift Indicator

Cancel Character Cancel Word

Cancel Line Continuous Line Space Control

THANK YOU

Thank you for taking the time to review the new Compugraphic learning package. We hope it offers an exciting and useful approach to teaching composition in high schools and colleges. Your comments will be carefully considered in preparing our final drafts.

Again, our sincere thanks.

Compugraphic Corporation

Please address comments to:

W.T. Carter, Education Manager
Compugraphic Corporation
80 Industrial Way
Wilmington, MA 01887

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